Predicting success in higher education:: predictive validity, attainment at school level and its relationship to degree class

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PREDICTING SUCCESS IN HIGHER EDUCATION:

PREDICTIVE VALIDITY, ATTAINMENT AT SCHOOL LEVEL AND ITS RELATIONSHIP TO DEGREE CLASS

By

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ABSTRACT

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PREDICTING SUCCESS IN HIGHER EDUCATION:

PREDICTIVE VALIDITY, ATTAINMENT AT SCHOOL LEVEL AND ITS RELATIONSHIP TO DEGREE CLASS.

This study examined the predictive validity of certain variables (Prior Achievement, Home Background, aspirational level) against a criterion variable i.e. Degree Class. The measures came from the ALIS (A-level Information System) in England. The main source of data were1167 students who agreed to complete questionnaire sent as part of the ALIS project. Simple correlation, multiple and stepwise and regression analysis were performed.

The following conclusion were drawn from the findings:

I. All the predictor variables except home background were significantly predictive of academic success in terms of scholastic performance, the predictive power was very low for average O level (AVO), socio economic status of Head of Household (HOH), moderate for the likelihood of staying in Education (LSE) and moderately high for A-level.

II. Total A-level was the best predictor of success at the Degree Class. The low predictability of the AVO may be attributed to a weakness to the power of the

preparatory programme. The low values for HOH may be because decision about future study had already been made perhaps on the basis of home background.

III. The Total A-level variable correlated 0.37 with degree class but it seems likely that this figure would be higher if it were possible to look at individual courses at particular universities.

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CHAPTER ONE

INTRODUCTION

1.1 BACKGROUND

Many studies report that the A-level examination in England serves the dual functions of assessing knowledge and predicting academic performance. As Smithers & Robinson (1991) stated that about 90% of entrants to Universities were accepted on the basis of their A-level results in 1990. The increasing number of Secondary School graduates and the complexity of job market are the main factors that are placing a great demand on higher education. The Universities need to maintain a certain level of performance within the Institution, so they attempt to select only those students who are qualified and potentially successful. Higher and advanced level educational institutions (A-level and degree level) differ in their degree of selectivity, from open-door to highly selective admission. The principle of selection involves social, educational, moral and legal values, which has led to a lively debate between those who advocate and those who denounce the use of selection measures in the A-level and Degree level as well. Those who reject the idea of selection and advocate an open-admission policy base their arguments on legal and social grounds. "Equality of

Educational Opportunity" is one of their most appealing arguments. They also challenge the validity of selection measures, especially the use of standardised tests, in the admission process.

The persons who advocate selective admission, base their arguments on the ground that selectivity is a necessity and on the empirical evidence of the validity of selection standards. We see that most of the Universities and Colleges are selective, this does not means that a high school graduate has a slim chance of obtaining a place in a higher education institution. The rejection ratio in many universities is small. Besides, students who are rejected at one university are able to seek admission to other institutions of higher education. Thus, most of those who apply for higher education are accepted (Hartnett, 1982).

On the other hand in school level, Tymms (1995) reported that a comprehensive monitoring system in England which is called ALIS (A-level information system) had been extended to investigate the effectiveness and ineffectiveness of the departments as their students joined the University. Tymms (1995) predicted that effective departments could have negative consequences if they pushed their students on the courses where they (students) found that they were out of their depth. This phenomenon might have an adverse impact on their academic achievement.

1.2 RESEARCH PROBLEM

The decision of whether to admit a student to a Degree is difficult one (Hirschberg & Itkin, 1978; Remus & Wong, 1982). The quality of the students joining a University will eventually determine the quality of graduates. This in turn will reflect upon the reputation of the Higher Education Institution. Selection Committees of the Departments of Higher Education Institution (University and University College) want to choose students who will succeed in Degree level and in their subsequent careers. A major problem in applicant selection is to find valid criteria upon which to base admission decisions (Lust, 1981; McQuade, 1975; Goldman & Slaughter, 1976; Wood, 1980).

1.3 PURPOSE OF THE STUDY

The major purpose of this study was to investigate the relationship, if any, between academic success at universities and predictor variables such as prior achievement and socio-economic status.

1.4 BASIS FOR THE STUDY

The present researcher attempted to collect data for this study from his own country Saudi Arabia in respect of the data related to High School Total Score (HSTS), undergraduate Grade point Average (UGPA), Graduate Point Average (GPA), Final dossier rating and final interview rating and other applicant factors exist in the admission to degree level. When the researcher put the data in the statistic package for the social science (SPSS) package for analysis the results were problematic which made the data un-useable. After this failed attempted to collect the proper data from Saudi Arabia, the study concentrated on the data of English System.

Fitz-Gibbon's (1995) study favoured a system to evaluate education institutions (Schools) within school system. Fitz-Gibbon created a model for the self-evaluating educational system (ALIS). This study is undertaken on the readily accessible forms of data and work done by Fitz-Gibbon (1995) and Tymms (1995). So the selected paradigm is based on Fitz-Gibbon (1995) and Tymms (1995) studies. In this study, drops-out are not included, because most reported studies of relationship between A-level attainment and degree performance consider only those who have graduated. Further this study was that of criterion related validation, specifically predictive validity. The predictive validity relates to the extent to which a student's future level of performance (degree) is related to the mean grade achieved by the students at O level (AVO), Likelihood Staying in education (LSE), socio economic status of the Head of House (HOH), and the A-level grades themselves.

1.5 THE RESEARCH QUESTION

The major research question that structure this proposed study was the following: What is the relationship between the predictors variables (AVO, LSE, HOH and A-level) and the criterion variable i.e. Degree level.

1.6 SIGNIFICANCE OF THE STUDY

The findings of this study will help the Higher Education Institutions to assess the predictive utility of the criteria used by the admission committee to select the students. With this knowledge, the admission process may be re-evaluated and improved. Using criteria to select applicants for admission that are valid indicators of those applicants' future academic success is of prime importance because they serve as a protection for students who otherwise waste their time and money or an educational endeavour that may fail to complete. In addition, admitting students equipped to succeed in the educational programme and in their professional lives is the stepping-stone to the development of a department's reputation in the University. Another consequence of admitting students who are academically equipped to succeed in the program is that the Department's withdrawal rate will decrease.

The results may generalise to other country's Educational Institutions having similar student populations and evaluation instruments.

1.7 ORGANISATION OF THE STUDY

The proposed study is organised in five following chapters:

Chapter 1: Include a background for the study, purpose of the study, a statement of the problem and research question and significant if the study.

Chapter 2: Contains a review of pertinent research literature. The theoretical framework and empirical evidence are two major parts of this study.

Chapter 3: This chapter contained the research design and methodology, the study sample, variables and data sources.

Chapter 4: Contains the results of the data analysis. The findings are interpreted and the results are discussed.

Chapter 5: This last chapter of the dissertation include a brief summary study problem and major conclusions of the investigation are set forth. Recommendations are also made for further research.

CHAPTER TWO

REVIEW OF LITERATURE

2.1 INTRODUCTION

The predicting the success of prospective school and university students has been a problem facing undergraduate and undergraduate committees for decades. Defining what constitutes a successful performance is one part of the problem (Goldberg and Alliger, 1992;Hartnet and Willingham, 1980). Another part of the problem for admission committees is to determine what measures are necessary to predict successful undergraduate and graduate student performance. The measures, refined over the years, are the admission requirements of the college and university. The literature included in this review contains research studies relevant to investigating the validity of the measures of High School Grade Point Average (HSGPA) in the United States and standardised scores from aptitude tests, reading and vocational interest inventories that are often used in student assessment and for the prediction of success in a University programme of studies and for their utility as counselling tools for helping students to make realistic and meaningful career choices.

Numerous studies have addressed the many facets of the predictive validity question. A limited number of studies have focused on prediction differences and prediction bias.

2.2 WHAT IS VALIDITY

The classical definition of validity is: the extent to which a test measures what it is intended to measure. According to the APA Standards for Educational and Psychological Tests (1974), "validity refers to the appropriateness of inferences from test scores or other forms of assessment" (p. 25).

The validity of a test is situation specific. A test may be valid for one purpose and not be valid for others. There are four main types of validity, depending on the purposes for which tests are used. These types of validity are: content validity, concurrent validity, predictive validity, and construct validity. Content validity is concerned with whether or not the test covers the whole subject area which is to be assessed. Concurrent validity is concerned with whether or not the test scores estimate a specified present performance whereas predictive validity is whether or not the test scores predict a specified future performance. The difference between concurrent validity and predictive validity is the time of testing. Construct validity is the generalization made about the responses and results of assessments in relation to other assessments. Construct validity cannot be directly measured, it involves the theoretical basis upon which the assessment is based. In the present study, predictive validity is most related to the variables or measures to be investigated.

A measure's predictive validity is its ability to predict performance on a certain criterion after a certain time interval. Predictive validity concerns the relationship or correlation between the predictor and the criterion and can be reported in terms of a correlation coefficient (Cronbach, 1971). It can also be expressed in terms of an expectancy table or expectancy chart (Anastasi, 1976). All of the forms are interdependent. However, the most common method used is the correlation coefficient which is also called the predictive validity coefficient.

There are a number of factors which can be expected to affect the predictive validity coefficient. One of them is time interval between the predictor measure and the criterion measure. The longer the interval, the lower will be the correlation. Another thing that influences the predictive validity coefficient is the restriction of range. If the predictive validity coefficient is counted from only a restricted, preselected group, the coefficient is expected to be low. However, predictive validity coefficient rises when a test is used on a group with a wide rang of ability (Cronbach, 1975). The non-linearition between the predictor and the criterion can influence the predictive validity coefficient. The correlation coefficient between the predictor and the criterion will be low, if the regression line of criterion on the predictor is not linear. Furthermore, the reliabilities of the predictors and the criterion affect the predictive validity coefficient.

2.3 PREDICTIVE VALIDITY STUDIES

The undergraduate Grade Point Average (UGPA) and Graduate Record Examination (GRE) scores are the most commonly used predictors in studies of graduate school success in the USA (Morrison and Morrison, 1995;Willingham, 1974). GRE scores are also one of the most heavily weighted admissions variables by graduate schools (Ingram, 1983). Other commonly used predictor variables in the graduate school admission process include references or recommendations from undergraduate professors, undergraduate academic achievements or awards, work experience, impression made during an interview, and Miller Analogy Test (MAT) scores (Oltman and Hartnett, 1985). These variables have also been examined in predictive validity studies, although not to the extent of UGPA and GRE scores. GRE scores combined with GGPA are often used as a device to select only the top scoring applicants and eliminating lower scoring applicants. Oltman and Hartnett (1985) found that UGPA in the undergraduate's major field of study was the predictive variable most highly regarded by admission committees. Other variables of Under Graduate Point Average (UGPA), such as overall UGPA, and UGPA in junior and senior years were also highly regarded. Hackman et al (1970) found variables of UGPA to correlate inconsistently with measures of doctoral success in psychology. Willingham (1974) suggested that UGPA displayed low to moderate correlations in validity studies. Despite low to moderate correlations with measures of college / university success, virtually every graduate program requires UGPA as a criterion for admission. GRE scores have also shown low to moderate correlations with measures of college / university success, virtually every graduate program require UGPA as a criterion for admission. GRE scores have also shown low to moderate correlations with measures of university success. Given the fact that the two most widely used predictors of university /college success have low to moderate correlations with measures of college /university success, the task of selecting students for graduate programs seems extremely difficult.

The GRE has been studied extensively in predictive validity research. This could be due to the fact that GRE scores and to a much lesser extent MAT scores, are normally the only 'external' criteria used for admission purposes. External in this instance means that GRE tests were developed and administered by an agency outside universities. GRE scores are also a measure apart from the student's academic and work experience. Oltman and Hartnett (1985) found that 64 per cent of the universities with graduate programmes either required or recommended that candidates for admission submit GRE general test results. They also reported that about 75 per cent of all doctoral programmes required or recommended submission of GRE scores. With such a large percentage of graduate programmes requiring students to take the 'external' GRE it is not surprising that a large number of researches have investigated the predictive validity of the GRE.

The correlation between GRE scores and Graduate Grade Point Average GGPA has been studied extensively. A list of GRE studies using GGPA as the criterion variables is shown in Table 1. Some studies reported correlation to the second decimal place while others reported values to the third decimal place. For consistency, the correlation coefficients in Table1 have been rounded to the second decimal. These studies span about three decades. The GRE/GGPA correlations tended to be inconsistent over that time period, showing a great deal of variability. About half of the correlations reported were statistically significant. Goldberg and Alliger (1992) conducted a meta-analysis of studies using GRE/GGPA correlations for students in psychology and /or counselling programmes. They found the correlations to be low. They found the (Graduate Record Examination Quantitative) GREQ/GGPA correlation to be .15 and (Graduate Record Examination Verbal)

GREV/GGPA correlation to be .15. These correlations would explain of about 2 per cent of the variance. Other factors must account for 98 per cent of the variance in GGPA. They concluded that GRE scores are not valid predictors of GGPA for psychology and /or counselling students. Morrison and Morrison (1995) also conducted a meta- analysis of 5,186 subjects from twenty-two predictive validity studies across several disciplines. Their results were similar to the results of Goldberg and Alliger (1992). They found the GREQ/GGPA correlation to be .22 and the GREV/GGPA correlation to be .28. These correlations produced a variance of about 6 per cent leaving 94 per cent unexplained. They concluded that the correlations were so low that they were almost useless for the purpose of predicting.

Tablel: Studies Examining the Relationship between GRE scores and GGPA by Programmes.

Authors	Predictors	Criterion Measures	Programme	N	r
Kaczmarek & Franco (1986)	GREQ GREV GRET. GREQ GREV GRET	GGPA	Counselling (Males) Counselling (Females)	18 25	.04 .11 .00 .56** .24 .52**
Roscoe & Houston (1969)	GREQ GREV	GGPA	Education	252	.21* .32*
Williams, Harlow & Gab (1970)	GREQ GREV	GGPA	Education	84	.50 .37*
Dole and	GREQ	GGPA	Education	44	.11

Baggaley (1979)	GREV				.14
Thornell & Mcloy (1985)	GREQ GREV GRET	GGPA	Education	462	.30* .49* .44*
House (1989)	GREQ GREV GRET GREQ GREV GRET	GGPA GGPA	Education (24 & under) Education (25 & older)	260 878	.29** .29** .30** .24** .35** .34**
Kluever & Green (1992)	GREQ GREV GREA GRET	GGPA	Education	248	.27 .26 .31 .31
Mathews & Martin (1992)	GREQ GREV GREA GREQ GREV GREA	FYGPA FYGPA	Education (29 & under) Education (30 & older)	848	.11 .16 .13 .10 .20 .15
House (1994)	GREQ GREV GRET GREQ GREV GRET GREQ GREV GRET	GGPA GGPA GGPA	Education Education (males) Education (females)	6,401 2,187 4,212	.18** .28** .25** .20** .27** .26** .21** .28** .27**
Ayers & Quattebaum (1992)	GREQ GREV GREA	GGPA	Engineering (Asian Studies)	67	.32** .07 .01
Thornell & McLoy (1985)	GREQ GREV GRET GREQ GREV GRET GREQ GREV GRET	GGPA GGPA GGPA	FineArts Humanities Math/ Science	35 27 58	.22 .42* .36* .35* .45* .45* .37* .47* .48*
Goldberg & Alliger (1992)	GREQ GREV GREA	GGPA	Meta-analysis of Psych / counselling	963 380	.15 .15 .29
Morrison & Morrison (1995)	GREQ GREV	GGPA	Meta-analysis	186	.22 .28
Rhodes, Bullough & Fulton (1994)	GREQ GREV GRET GREQ GREV	FYGPA GGPA (Final)	Nursing Nursing	316 316	.15* .13* .15* .20** .19*

	GRET				.20**
Stricker & Huber (1967)	GREQ GREV GRET GRE Psych	GGPA	Psychology	37	.26 .20 .31 .35*
Wiggins, Blackburn & Hackman (1969)	GREQ GREV GRE Psych GREQ GREV GRE Psych	FYGPA FYGPA	Psychology (1965 Sample) Psychology (1966 Sample)	46 58	.21 .20 .34* .10 -.13 .31*
Hackman, Wiggins & Bass (1970)	GREQ GREV GRE Psych	GGPA	Psychology	42	.15 .22 .23
Federici & Schuerger (1974)	GREQ GREV GRE Psych	GGPA	Psychology	47 40	.01 .30* .19
House, Johnson & Tolone (1987)	GRET	GGPA	Psychology	76	.15

* p < .05, ** p<.01

The low to moderate correlations of the meta-analyses discussed above were similar to values reported by the GRE board, but with different conclusions. Schneider and Briel (1990) reported for the Education Tests Service (ETS) that GREV had a correlation of .29 with first year GGPA while GREQ had a correlation of .28 with fist year GGPA for 9200 native English speaking students. Schneider and Briel (1990) also reported that undergradute grade point average (UGPA) had a correlation of .34 with (First Year Grade Point Average) FYGPA and the correlation of GREQ,GREV,GREA and UGPA of .43. Their conclusion was that the combination of GRE scores and UGPA predicted FYGPA more effectively than UGPA alone. While this conclusion is true, the increased effectiveness appears slight. The correlation of UGPA alone was .34. This means that UGPA alone accounted for 12 per cent of the variance of FYGPA. The variance of the GRE and UGPA correlation was $.43^2$ which equals 0.18. This means the combination accounted for 18 per cent of the variance in FYGPA, while UGPA alone was 12 per cent. The 6 per cent difference is very similar to the variances reported in the Goldberg and Alliger (1992) and in the Morrison and Morrison (1995) meta-analysis.

Thus to the results for individual studies Eight GRE/ GGPA predictive validity studies in education are listed in Table 1. While many of the correlations were statistically significant, the GRE/GGPA correlations for Education students were in the low to moderate range. The highest significant correlation reported was 0.49 for GREV/GGPA in a study by Thornell and McLoy (1985). This correlation produces a variance of .24 or 24%. The lowest significant correlation reported was .18 for GREQ/GGPA in a study by House (1994) conducted using Education students at Northern Illionis University. This correlation produces a variance of .03 or 3% GRE scores appear to predict GGPA inconsistently for students in Education.

There have been a number of predictive validity studies conducted in the area of psychology. Five studies using GRE scores to predict GGPA are shown in Table1. Inconsistent results were reported in these studies. GREQ scores appear to be a poor predictor of GGPA for students in psychology. GREQ/GGPA correlations also tended to be low and not significant, ranging from a .01 to .26. GREV/ GGPA correlations also tended to be low to moderate for psychology students, with one correlation being negative. Correlations ranged from a non-significant -.13 (Wiggins, Blackburn and Hackran, 1969) to a significant .30 (Federici & Schnerger, 1974). GRE psychology subject Test scores tended to be the best predictors of GGPA for psychology students with three correlations being significant. Even though the correlations for the psychology subject Test were in the low to moderate (.19 to .35), they were stronger than GREQ and GREV correlations.

Other disciplines also reported inconsistent results for GRE/GGPA correlations. Kaczmarek and Franco (1986) reported some relatively high correlations for female students in counselling. They found a significant GREQ/GGPA correlation (.56) and a significant GREV/ GGPA correlation (.52) for female students. They also found some relatively low and not significant correlations for male students in counselling. Although the number of students in this study was relatively small, the inconsistency in the predictive validity for male and female students raises a question of gender bias.

Ayers and Quattlebaun (1992) studies the predictive validity of 67 Asian students in Engineering, whose best language was not English. They found that GREQ was significantly correlated with GGPA for those students with a moderate correlation of .32. They also found that GREV and GREA were not significantly correlated to GGPA with extremely low correlations of .07 for GREV/GGPA and .01 for GREA/GGPA. The GREV and GREA use complex sentences that foreign students may not fully understand. These results seem to be consistent with GRE recommendations that GRE scores should be viewed cautiously as predictors of GGPA for students whose best language is not English. The correlations for the TEST of English as Foreign Language (TOEFL) in this study were also low and not significant (.05).

Rhodes, Bullough and Fulton (1994) in a study of nursing students found that GRE scores were significantly correlated to both FYGPA and GGPA. The correlations tended to be low, ranging from .13 for GREV/FYGPA to .20 for GREQ/GGPA and GRET/GGPA. They concluded that GRE scores were weak predictors of GGPA and not that standardised tests like the GRE do not assess the talents needed in a clinical discipline such as Nursing.

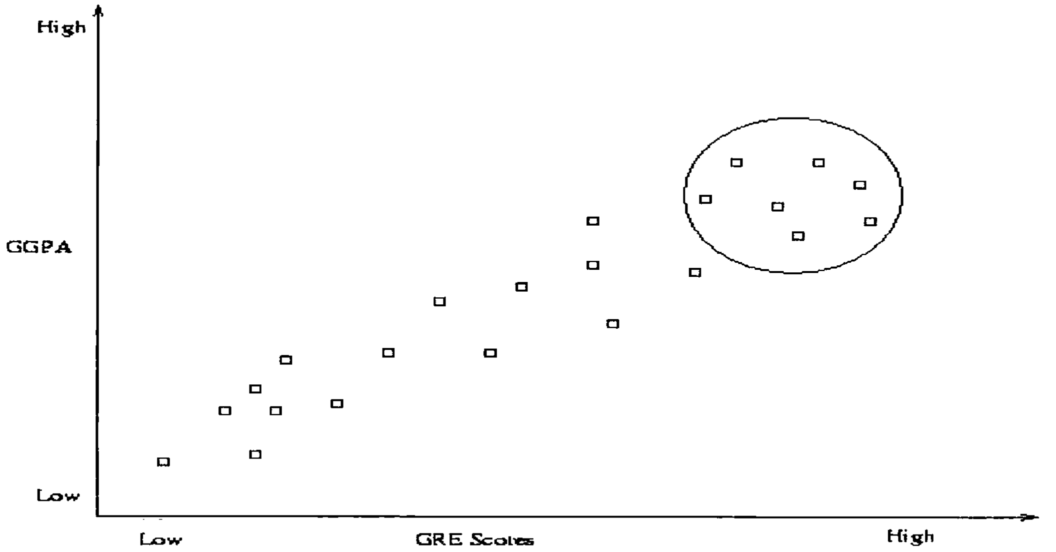
Ingram (1983) examined ten correlation studies of GRE scores and graduate success and found that GRE scores were unable to consistently predict graduate school success. The inconsistently of the GRE for predicting graduate school success as determined by graduate grade point average has caused researchers as well as ELS to recommend that institutions conduct addition research on predictive validity (E.T.S; 1989;House, Johnson and Tolone, 1987).

2.4 CRITICISMS OF PREDICTIVE VALIDITY STUDIES

There have been a number of criticisms of predictive validity studies and of predictive validity studies involving the GRE in particular (Willingham, 1974). These same criticisms are found in current studies (Goldberg and Alliger, 1992). Restriction of range has been a problem in almost every GRE predictive validity study. Student populations used for predictive validity studies are usually limited to students who have already been accepted by the graduate school, instead of from a population of students who applied for admission. By eliminating the students who were not accepted and using data only from students who were accepted, the range of student scores has been restricted. Givner and Hynes (1979) have shown that validity coefficients may be substantially lowered due to this type of restriction of range. Huitema and Stein (1993) studied a population that was not restricted by range. They found that the correlations in their unrestricted range sample were similar to correlations from studies with restricted range populations that had been adjusted by using formulas for the correlation of restriction of range. However, House (1983) found that the effects of restriction of range maybe slight in some cases. A hypothetical situation of restriction of range is shown in Figure-1.

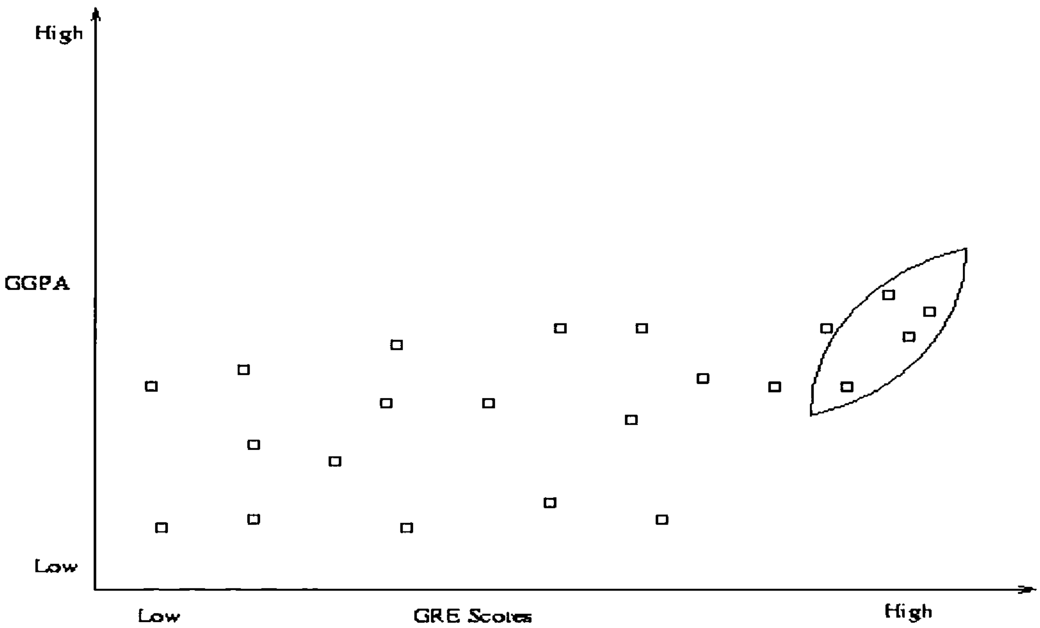
Figure 1 : Hypothetical Restriction of Range Situation 1

1



When the group of applicants is taken as a whole, there is a positive correlation between GRE scores and GGPA. When only students who were accepted into the programme are considered as a group (point within the circle), no correlation or only a slight correlation between GRE scores and GGPA occurs. In most predictive validity situations the only GGPA data available is for students who have been accepted into a programme, so it is impossible to know if this situation actually exists. A hypothetical restriction of range situation is illustrated in Figure-2.

Figure 2 : Hypothetical Restriction of Range Situation 2



In this situation, the students who were accepted into a programme are represented by the points inside the oval. When they are considered as a group, there is a positive correlation between GRE scores and GGPA even though the result would probably not be statistically significant. All students who applied for admission are represented by all the points both inside and outside the oval. When they are considered as a group there is little or no correlation between GRE scores and GGPA. This situation is also difficult to verify because GGPA data is normally only available for students accepted into the programme.

Restriction of range can also occur by the narrow range of GGPA earned by graduate students. Grade inflation is a problem that concerns adult educators. The trend of professors giving increasingly higher grades over the last thirty years is well documented. Shea (1994) reported that the average grade at Harvard University in 1970 was B or B-. The average grade in 1995 is now A- or B+. Farley (1995) reported that only between 10% and 20% of college students receive grades lower than a B-. Most graduate students earn either A's or B's in their courses, making their GGPA between 3.0 and 4.0. Dole and Baggarley (1979) reported that about 75% of all grades given graduate Education programmes within a metropolitan area where A's. Since grades are a formal university evaluation, the tend of giving mostly A's and B's makes distinguishing between high and low achieving students very difficult. This type of restricted range makes differentiation of grades difficult (Hartnett and Willinghan, 1980).

A second criticism of validity studies is the criterion problem (Hartnell and Willingham, 1980). Defining graduate student success is a difficult problem and all criteria have drawbacks. GGPA has some positive features as a criterion variable. It is available for all students, it is easily understood by most people, and it provides continuous, yet limited range of values. GGPA also has several drawbacks as a criterion variable. As stated earlier, grades at the graduate level do not vary greatly, which makes differentiation of student achievement difficult. If A- is average grade given for college students, then different between the top students who receive the A+ and the average students who receive the A- is very difficult, because both the grade of A+ and the grade of A- receive four points toward their GPA.

Grades can also vary across disciplines and within disciplines across disciplines across different institutions (Goldman and Slaughter, 1976; Hartnett and Willingham, 1980). Some studies have accounted for this variation by using grades from one university and in specific courses from within one discipline (House, Johnson, and Tolone, 1987). The implication is that by narrowing the population to a specific discipline within one university, then some of the grading variations are minimised. Therefore, narrowing the population to a specific major within a specific discipline within one university would further minimise the effects of grading variations.

Degree attainment has been a frequently used criterion variable. Williams, Harlow, and Gab (1970) found evidence that graduation/ non-graduation as a criterion variable could be more useful than GGPA even though the GGPA of students who graduated was 3.73 and GGPA of students who did not graduate was 3.51. Whether or not a student graduates is the ultimate test of their success in graduate school (Hartnett and Willingham, 1980). By awarding the student a diploma, the university has given the student its stamp of approval meaning the student has successfully fulfilled the school's requirements.

Degree attainment does have some limitations as a criterion variable. Using graduation/ non-graduation criterion variable assumes that students withdraw for a variety for academic reasons as well (Hartnett & Willingham, 1980). Another limitation is that it is a discrete variable rather than continuous. This can cause some statistical problems, especially in studies where a regression is used to predict a student outcome.

Other criterion such as comprehensive exam scores, dissertation quality, faculty rating scales and evidence of professional accomplishment, and length of time to degree, all have shortcomings (Hartnett and Willingham, 1980) that make them less than desirable as criterion variables in GRE predictive validity studies. First year graduate grade point average has been used frequently by ETS in correlation studies involving GRE scores. Therefore, it would make sense to use GGPA as the criterion variable in study involving GRE scores.

2.5 DIFFERENTIAL VALIDITY AND PREDICTION BIAS

Standardised tests, such as the GRE, that are used for student selection purposes should predict student success similarly for all groups of students.

Prediction bias is present if systematic differences exist between the test score and the criterion variable for different subgroups of students (Reyrolds, 1982). One method for studying prediction bias is a method known as differential validity (Jensen, 1980). This method tests validity coefficients of sub-groups of students for significant differences. Fisher's Z transformation has been suggested as a statistical procedure before testing correlations for significant differences (Edwards, 1984). This method has been used to assess whether the correlations of subgroups are estimates for the same population. If Z transformation of the correlation coefficient are statistically significantly different, then the correlations are significantly different, which means it can be assumed that the correlations come from different populations. If Z transformation is not statistically significant, then the correlations can be assumed to come from the same population. Several studies have employed this technique to examine differential validity (House, 1989; House, 1994; House & Keeley, 1993; Kaczmarek & Franco, 1986). For example, differential validity of GRE/ GGPA correlation coefficients with respect to gender groups could be assessed. Validity coefficients for men and women from the same pool of students would first be computed. Fisher's Z transformation would then be calculated to determine if a significant difference between correlation for men and the correlation for women exists. Differential validity could be useful in studying prediction bias for age groups, gender groups, as well as racial and ethnic groups.

Another method for studying prediction bias employs the mean error of prediction for different subgroups (Reynolds, 1982). An example using GRE scores and GGPA for gender groups will help illustrate how this statistic computed. The first step in this process is to compute a regression equation. This then used to calculate a predicted GGPA for each student from each student's GRE score. The student's actual GGPA is then subtracted from the predicted GGPA leaving a residual score. Mean residual scores are computed for male students and for female students. These mean residual scores are the mean error of prediction for each gender group. If the mean error of prediction is positive, then the predicted GGPA is higher than the actual GGPA. This mean GGPA was over predicted for the group. If the mean error of prediction is negative, then the predicted GGPA is lower than the GGPA, which was actually earned. This means that GGPA was under-predicted for that group. The final step in this process is to use an analysis of variance (ANOVA). ANOVA determines if a systematic error is present by testing mean residual scores for significant difference. This process has been called the Cleary Model for investigating prediction bias (House& Keeley, 1993). T.Anne Cleary (1968) investigated prediction bias by comparing differences of predicted and earned of Negro and white students in integrated college.

2.5.1 GENDER BIAS

As more women are entering graduate school, gender has become an important consideration for admission committees and for admission tests like the GRE. The general trend for the few studies that have focused on gender differences has been that academic performance (GGPA) has been under-predicted for female students and over-predicted for male students. Most of the research on gender bias has been done at the undergraduate level. House and Keeley (1993) found that MAT scores under-predicted GGPA for female students and over-predicted GGPA for male students. Similar findings were also reported for three specific course grades. Kacmarek and Franco (1986) found that for a very small sample of counselling students that GREQ scores did not predict GGPA similarly for men and women. House (1994) studied a sample of 6,403 graduate level Education students. He found that correlations between GRET, GREQ and GREV and GGPA were all significantly stronger for women than for men and that GRE scores may exhibit differential validity as a function of student gender. The limited number of gender bias studies at the graduate level and the results that indicate that GRE scores do not predict GGPA similarly for gender groups make it obvious that more research is needed in the area of gender bias for graduate level students.

2.5.2 AGE BIAS

Because older students are now entering college / University in great numbers, age has become an important consideration for admissions tests like the GRE. Sticker and Rock (1985) examined 1000 GRE scores of students in each of three different age groups who had taken the GRE General Test during 1982. Age groups were divided into three groups: ages 20-29, age: 30-39 and age: 40-49. They found mean GREQ scores of 545 for the younger group, 505 for the middle group, and 433 for the older group. They found mean GREV scores of 491 for the younger group, 513 for the middle group and 494 for the older group. They also found mean GREA scores of 536 for the younger group, 481 for the middle group and 432 for the older group. The general trend was for GRE scores to decline with the age of the student, the only exception being mean GREV scores in which all three age groups scored similarly. Relatively few studies have focused on age differences in the prediction of GGPA from GRE scores. Clark (1984) examined GRE scores for four age groups (those age 24 or less, 25-29, 30-34, and 0ver 35). She found the predictive validity of GRE scores to be in the low to moderate range, with no distinct pattern of correlation coefficients for age groups. She did find that GRE scores over-predicted FYGPA for the two younger age groups and under-predicted FYGPA for the two older groups. Swinton (1987) found that older (25 and older) female students from a variety of academic disciplines had a tendency to earn a higher GGPA than was predicted by their GRE scores. He also found that the GGPA of younger (24 and younger) female students were lower than predicted by their GRE scores.

House (1989) found that GREQ and GRET scores for older (25 and older) students tended to predict grades that were lower than the students actually earned (under-prediction). He found GREQ and GRET scores also predicted GGPA for younger (24 and younger) students that were higher than were actually earned (over-prediction). House found no evidence of differential validity between GRE and GGPA correlations. Mathaws and Martin (1992) found that age bias was present in a study of 925 Education majors. This study used the definition of 'older' student to be 30 years of older instead of the definition of 25 or older as in previous studies (House, 1989; Swinton, 1987). In a study involving another standardised test, House and Keeley (1993) did not find prediction bias in a study of older and younger students in Education using MAT scores to predict GGPA. They did find significant differences in grades earned in two of five specific education courses. In these courses, the grades of older students were under-predicted and grades of younger students were over-predicted.

2.6 GCE A-LEVEL ATTAINMENT AND DEGREE PERFORMANCE

Peers and Johnson (1994) argued that A-level examinations serve the dual functions of assessing knowledge and predicting academic performance. The significant role that A-level examinations have in respect to higher education in England and Wales is well recognised. In 1990 approximately 90 per cent of entrants to universities were accepted on the basis of their A-level results (Smithers & Robinson, 1991). From the earlier studies, it is revealed that a little attention has been paid, in the UK in recent years, to the relationship between knowledge prior to entry into higher education in school as well as subsequent degree performance. The study related to examine the relationship between A-level and subsequent degree performance was not so old (Sear, in 1979; published in 1983). Most of these particular literature are sparse, and either outdated or narrowly focused (Billing, 1973; Bourner & Hamed, 1987; Forrest, 1989). Peers and Johnson (1994) reported that when synthesised by traditional review methods, findings were equivocal. Some studies have found either no relationship between A-levels and final degree performance or a negative relationship (Barnett & Lewis's 1963 re-analysis of Petch's data; Entwistle & Wilson, 1977; Rees, 1981; Wankowski, 1970), whilst other investigators have reported small but positive correlations (Abercrombie, Hunt & Stringer, 1969; Bourner & Hamed, 1987). Despite these findings it is generally assumed that A-levels have sufficient predictive validity to warrant using them as the primary means of university selection.

The inconsistencies in the reported relationship between A-level and degree performance have mostly been attributed to aspects of study design or statistical artefacts such as sampling error. Hunter &Schmidt (1990) identify 11 artefact categories that could mediate a study correlation in comparison to the actual correlation. They argued that the most damaging artefact in conventional reviews is sampling error. If residual variation across studies remains after adjusting for sampling error then this is indicative of a moderator variable(s) operating. Since it has not been established that variation may be attributed to systematic effects there has been little attempt to ask what these might be (Peers and Johnson, 1994). Some other work suggests possible answers. It is well established that learning approach is a generic term referring to thinking processes, and motivational and goal oriented aspects of learning. It is assumed to be relatively stable states within individuals (Volet & Chalmers, 1992), related to academic performance (Marton & Saljo, 1984). From the perspective of general learning theories the complex relational aspects of cognitive components of prior knowledge, personality, motivation and academic performance are well researched. There exists a diverse body of literature on students' personality, motivation and academic performance in higher education (Entwistle & Brennan, 1971;

Entwistle & Entwistle, 1970; Entwistle, Nisbet, Entwistle & Cowell, 1971; Entwistle, Percy & Nisbet, 1971; Furnham & Mitchell, 1991; Green, Peters & Webster, 1991; Walton, 1987; Wilson, 1971).

Recently, empirical studies of learning in higher education have focused on the relationship between cognitive elements and contextual factors in the learning environment. Whilst a contextual influence on learning approach has been shown (Entwistle, 1987; Hodgson, 1984; Ramsden, 1984), mediating effects of contextual variables on prior knowledge and learning results in higher education have received less attention. Dahlgren (1984) has focused the need to consider interrelationships between cognitive, contextual and experiential aspects of students' learning. Janssen (1989) has also proposed a theory of studying in higher education which incorporates experiential, cognitive and motivational concepts. Motivational and personality variables with A-level data has been shown by Freeman (1970), Hamilton & Freeman (1971) to improve the predictability of academic success, and based on Janssen's theory, Minnaert & Janssen (1992) have shown the direct and substantial influence of prior knowledge, learning context/experience (curriculum completed) and intrinsic motivation on examination success in higher education. A number of studies (Meyer, 1991; Nuy, 1991; Sheppard & Gilbert, 1991) have examined how teaching methods at university level interact with students' own approaches. These studies all make clear that students differ widely in their ability to benefit from teaching that encourages them to develop a more mature learning approach. However, none of them includes data on the students' qualifications on admission to university.

2.7 RESEARCH ON GRADES AND TEST SCORES USED IN PREDICTION

2.7.1 SCHOOL GRADES AS PREDICTORS

The value of group psychological tests for use in selecting students into University courses was first studied in 1925, at Smith College, Massachusetts. The test battery used was the Intelligence Examination devised by E.L.Thorndike. The study determined the test battery was a better predictor of first year success than it was of later years. The findings also indicated that the test results were unable to predict long term stay in college. High school records were found to be as accurate in their prediction of student's first year of academic success in college (Rogers, 1925). College and pre-College GPA's were computed from records collected from 24 college and Universities in Missouri in 1966 to help determine the statistical relationships between elementary and high school grades with college GPA. First semesters students who had completed their elementary and high school years in the same Missouri school district were used for the sample group. The eight-grade averages and high school GPA's were found to be equally effective predictors of college performance (Lewis, 1966). Research on prediction conducted in the province of Ontario also found HSGPA to be a better predictor of University success than were students' scores obtained on aptitude tests such as the Ontario Scholastic Achievement Test (OSAT), SAT, and the SACU (Allen et al; 1983).

2.7.2 PREDICTION FIRST YEAR COLLEGE/ UNIVERISTY SUCCESS

A thirteen-year study at the University of Georgia looked at the SAT measures when combined with High School Grade Point Average (HSGPA). It determined that the low increase in statistical significance was neither predictive efficient nor cost-effective (Fincher, 1974). Thornell & Jones (1986) examined the value of the American College Testing programme (ACT) and secondary school programme as predictors of academic performance for the first year of College. Their study found that High School Rank (HSR) and ACT scores were both significantly related to first year college grade point average. The higher correlation with College GPA, however, was found to be related to the secondary school programme. O'Connor and McAulty (1981) had previously found in 1980 that ACT scores were able to predict engineering students success, however, they cautioned that students' who scored low should not be denied admittance because there were additional indicators of successful performance in engineering school. A critical study of first year students was conducted by Holland and Richards (1965) of the ACT. This testing measures found, in general, correlations between academic measures and achievement were significant but low (0.04) for a sampling of 3,770 male students and 3,492 female students. Studies conducted at the University of Regina (Mundle, 1978; Magusson, 1981; Dahlern, 1984; MacDonald, 1984) were design to help determine the use, predictability and effectiveness of various standardised tests, including the Differential Aptitude Test (DAT) that were administered to education students during the first semester of their education programme. They found similar results indicating that HSGPA showed the highest correlations with first year university GPA. A Canadian study conducted at the University of Victoria examined the relationship of first year University grades and grade scores obtained on academic measures assessed by the General Education Development Test (GED) taken by mature students, the study found that the GED scores used in prediction of University grades provided little information regarding student success (Ayeres, 1980).

2.7.3 PREDICTION BEYOND FIRST YEAR

The largest body of research conducted in North America indicates that High School Grade Point Average is the best single predictor of first year University grades (Siegleman, 1971). Students with higher SAT scores on entrance to University were reported by Sgan (1964) to more likely have higher of four year grade point averages than students with lower SAT scores. Juola (1966) at Michigan State University reported a pessimistic view of the value of ability test scores for prediction of college success beyond the students' first term. Husmphrey (1968) also found that senior College grades are much less predicable from entrance information than are freshman grades. Lunneborg and Lumebog (1970) also reported that senior GPA was not as early predicted as was Freshman GPA. Wilsom (1980) suggested that the most appropriate measure for comparative analysis with HSGPA would be the final cumulative grade point average, based on all work completed by students during their undergraduate courses. However, Wilson's 1983 study found admissions measure to be insufficient for predicting performance beyond the freshman year. He determined from these studies that freshman- year GPA does not sufficiently represent a student's academic performance.

Researchers in North America have often debated the findings on prediction of University success from scores obtained on standard tests. For example, Humphreys (1976) criticized researchers, such as Mauger and Kolmodin (1975) for using cumulative GPA, and generally conducing that senior college grades are as predictable from entrance information as are freshman grades. Mauger (1971), in response, criticised Humphrey findings and suggested that he may not have allowed for range of talent, or reduced grade variance, and that this resulted from his use of highly motivated minority group of students who persist to graduate. The difference in finding was pointed out by Humphrey (1976) to be due to the difference in statistical methodology used for data analysis.

Researchers, such as Mauger and Kolmodin have generally used cumulative GPA, whereas, Humphreys found that when GPA's are independently computed for each semester of undergraduate achievement the results indicate that senior college grades are less predictable from entrance information, such as scores from standardized aptitude tests. Humphereys concluded that restricted range of talent, reduced grade variant, or reduced grade reliability were not responsible for the lower predictability of senior college grades. He recommended that psychologists should, therefore, abandon their interest in cumulative GPA (Humphreys, 1976).

A review of the studies conducted on academic criteria, students' performed qualities and admission requirements indicated that college success seems to be extremely difficult to pinpoint, especially since most correlations between measurements of success and scores on assessment instruments are generally found to be weak (Hiss et al. 1984). The National Educational Longitudinal Study of 1988 conducted on 26,000 randomly selected eight-grade students with follow up surveys taken at two year intervals after the original eight grade test period, found that aptitude measures from standardised tests generally fail to predict future academic achievement (Russo, 1988). HSGP was determined to be a better predictor of success to teacher education than aptitude tests scores (AACTEP, 1993).

2.7.4 STUDIES EXAMINING APTITUDE SCORES IN PREDICTION

Price and Kim (1976) at Kansas State College noted a decline over 11 year period prior to 1976 in the ' Average Scores' of college bound high school students on the Scholastic Aptitude Test (SAT). Their study conducted from 1974-75 found that HSGPA was a more significant predictor of college performance. Social Science and Mathematics scores from the SAT were the recommended variables for prediction or alternatively the ACT composite together with high school composite grades. The ACT scores were believed, however, to be more significant in predicting individual ability to perform in college. There was also a noticeable decline from 1961 to 1974 in the ability of SAT over HSGPA to predict college grades in general (Dalton, 1976).

Fincher (1974) concluded from an analysis of the data collected from the SAT over a 13 year period at the University of Georgia, that the SAT did not prove to be of value for either predictive efficiency nor for cost-effectiveness. Trusheim and Gouse (1984) determined the SAT provides, 'virtually no additional information beyond the high school record'. Personal application forms were determined more significant in student assessment than were aptitude measures (Fergusson, 1991) which often minimal benefit to the assessment process (Crouse, 1991) and small contribution to prediction (Baron & Norman, 1992; Young & Barrett, 1992) and should be used cautiously (Jenkins, 1992).

2.8 EUROPEAN INVESTIGATION ON PREDICTION

The European Symposium, reported by 12 Western European countries was held in 1978, at the Werner Reimers Foundations in Hamberg, West Germany, to study the use of tests and interviews for admission to higher education. The symposium found that secondary school marks were the most reliable predictor of future academic success. It did not matter whether the school marks resulted from continuous assessment or final examination. Personality tests were found to be unsuitable for prediction of academic success. Scholastic aptitude tests were seen as having only moderate predictive value provided they were administered under realistic conditions of operation and under careful scientific control (Mitter, 1979).

2.9 GRADING PROBLEMS

Grading at its best has often been found to be inaccurate and unreliable. The rise in the average level of undergraduate grades reported in the 1960's was found to coincide with the decline in average scores on the scholastic aptitude test. However, there did not appear to be a lowering of grading standards (Weller, 1984). A study of four years achievement at the University of Illinois from 1962 to 1967 found substantial change in students' grades from semester to semester indicating an overall increase in GPA (Humphreys, 1968). The phenomena of increased grades, which continued through into the 1980's was suggested by Weller (1984) to be due to the use of a variety of available options for students to improve their final course grade. Weller (1984) found there is a general reluctance on the past of the faculty to "fail" students. He explained this may be related to the use of student evaluations as part of the criteria for grading promotions and tenure of faulty.

2.10 PROBLEM WITH GPA: LACK OF STANDARISATION

Goldman and Slaughter (1976) had previously pointed out, from their study of students enrolled in five undergraduate classes, three sciences and two social sciences at the University of California, that many errors in the selection of college students are inversely related to the validity of the predictors employed. They concluded the generally weak validity with which GPA has been predicted give rise to a substantial number of selection errors, therefore, the problem is not a predictor problem, rather, it is a criteria problem. They further conduced that as long as there are radical differences in grading standards, and students are able to choose most of their classes, then no predicting will have more than moderate validity for predicting GPA. The validity problem was determined to be a result of the shortcomings of the GPA, is the lack of standardisation (Goldman and Hewit, 1975). This variation in grade standard existing from institution to institution has been referred to as the " differential department grading standard" (Wigington, 1985).

One 1989 comparison of the grading standards of thirty Canadian University found, "there are very real differences in percentages of first class grades given from University to University" (Mitchell, 1990). Admissions officers were cautioned by Young (1990) to understand that the validity of coefficients used in grade prediction have been artificially depressed by the degree of measurement error found to be inherent in GPA. GPA did not predict success on teacher preparation programmes (Morgan, 1991).

2.11 OTHER FACTORS AFFECTING GPA

Studies conducted to evaluate the relationship between academic predictors and academic achievement have often determined that academic success is found to be associated with both cognitive and noncognitive factors (Pascarella & Terenzimi, 1980). Roueche and Archer (1979) cautioned that HSGPA can be influenced by grade inflation and social promotion and is of little use at the community College level (Goulick, 1986). Achievement measures in the 'Humanities' were found to be more socially defined in comparison to achievement measures in the 'Sciences' (Polydorides, 1986). Stafford el al; (1984) stressed the need to consider social and economic factors which are found to effect academic achievement. Psychological factors were also found to effect academic success (Castenedc, 1985). In their 'Conceptual Model' of individual participation in higher education, Lundstedt and Lynn Jr, (1984) found there was not enough adequate data available to be able to include an individual, immediate social and psychological factors into their study in a meaningful way. They, however, stressed the importance of including these factors for the development of a work able model.

A longitudinal study conducted the Maryland University in 1988, based on HSGPA and scores on the Scholastic Aptitude Test found that regardless of aptitude and higher school performance there was a tendency toward unrealistic expectations in students whose educational goal at the time of their freshman year involved going onto a professional faculty. Regardless of the HSGPA obtained, the problem of a student's self-perception of their future potential and their future aspirations remained to be determined. Another factor found important for consideration is a student's personal motivation to complete the engaged goal (Maryland, 1988). Winter (1977) previously hypothesised that the relationship between motivational factors and academic performance takes the shape of a reversed U curve. Students with high or low motivation were determined to not perform as well as students who fall in the middle levels of this motivational curve. Although Aptitude measures are found to identify students who are high and low academic achievers they do not adequately identify students in the middle range (Westhoff, 1980). A longitudinal study conducted at Cloork University on academic motivation found motivation to have low-correlation with aptitude measures (Bakes & Siryk, 1988).

Karmos and Karmos (1984) found students' attitudes toward taking achievement tests, as determined by attitudinal measures on the Attitudinal Test (AT) accounted for 14% of the variance in their academic aptitude, as measured by SAT scores. The researchers cautioned that this influence should be considered by researchers on achievement of test performance.

Studies conducted on predictors of academic success of very high achieving students generally indicate that academic ability is not the only factor of college success (Baird, 1985). Noncognitive factors generally have been found to be related to college success for North American students (Farver, 1975; Tracey and Sedlacek, 1987). Noncognitive factors were also found to be significant for international students (Boyer and Sedlacek, 1988). Research on academic prediction generally concurs that there are other factors than academic related characteristics which affect assessment beyond secondary schooling (Jones, 1990). However, Sedacek (1989) stressed that non-cognitive factors should be used in admission procedures in higher education.

2.12 IMPACT OF SCHOOLING

There are several studies which suggest the schools have an impact on the achievements and attitudes of their students (Rutter el at, 1979; Willms, 1987). In their studies Fitz-Gibbon (1992); Smith & Tomlison (1989), Tymms (1993) have observed that schools may not be the best unit of analysis and departmental effects may not be considered in this regard. Tymms (1995) also investigated the relationships between the effectiveness of A level departments comprehensive schools, Sixth Form Colleges and Further Education Colleges in England and the success and attitudes of students several years later, in job, training and academic matter. He found that students' A level grades appeared to be influenced in fairly equal measures by the effectiveness of the departments which taught them and by the relative ease of subject taken. Those who attended effective departments tended to be advantaged by about a third of grade per subject, whereas students taking a relatively easy set of A levels were advantaged by about a fifth of a grade. Whether a student attained a degree or not was not related to the level of ease of the A level course studied (Facility). However, students who followed a relatively hard 'A' level course were significantly more likely to move straight onto successful degree course after A levels. Tymms (1995) also observed that there was no indication that degree classification was related to attendance at an effective A level course. The Academic self-concept of students was higher, the higher the effectiveness of the A level departments that they attended. It was higher the more academic the Higher Education course attended and the higher the Relative Standing. So students attending effective A level departments were more likely to obtain degree and have higher Academic self-concept.

2.13 REDICTIVE POWER OF READING TESTS

The Reading and English sub-tests of aptitude test batteries are often reported in research conducted on aptitude instruments. The English subtest of ACT has been found to be significantly related to college grades, but, the Mathematics sub-test and social science Reading subtests were found to be even more significantly correlated with prediction of future scholastic success (Price and Kia, 1976). The English and Reading subtests of the ACT were found to have predictive value, however, there proved to be a steady reduction in prediction validity over the first three years of college performance (Humphreys, 1969). The social science and physical science Reading subtest of the ACT were found to have greater predictive power than the English subtest; however, high school rank proved to be the best predictors of college success (Humphreys, Lewry and Taber, 1973).

2.14 INTEREST AND ACADEMIC ACHIEVEMENT

Interest and academic success have been found to be closely related. Interest has most often been generalised to be associated with vocational choice. The concept of 'Interest' as related to vocational choice was defined by Super (1949) as; " the collective information about an individual's personal interests, and preferences (likes and dislikes) for certain activities, events, and people that uniquely and generally link the individual with specific areas of work". Implicitly, it appears that a profession may represent a way of life as well as a way of earning a living.

2.15 DEVELOPMENT AND GENERAL RELIABILTIY OF STRONG CAMPBELL INTEREST INVENTORY (SCII)

To help determine students' "interest" for specific vocations the Strong Campbell Interest Inventory (SCII) was first administered in 1927 (Strong, 1927). The SCII-T32s has generally been found to be highly reliable with good predictive validity in the range of 50% to 70% and is the most used instrument for vocational counselling (Walsh and Betz, 1985). Johnson and Johansson (1972) found that 75% of the people were in occupations related to their SCII profiles. Spokane (1979) found that 50% of the people in his study sample who took the test entered the profession in which they had high scores. A follow up study found the same people also reported a high level of job satisfaction. Further, a large number of people who entered careers in which they scored low, as indicated on the SCII profile guide, reported a high level of job dissatisfaction.

2.16 ASSESSMENT MEASURES AND POST UNVIERSITY PERFORMANCE

Researchers interested in the relationship between academic achievement and success in the 'real world work' have studied the utility of grades and assessment measures to indicate post-university performance. Hoyf (1965) reviewed 46 studies on the relationship between grades and college grades and 'real world work' achievement and determined there was no significant relationship between grades and success in business, engineering, medicine, scientific research or teaching professions. Gable (1967), based upon a review of previous studies on assessment measures and "real world work" achievement, emphasized the need to determine more appropriate admissions methods for selecting students. Similarly, Young (1986) found that grade point averages were negatively correlated with 'real world work' success of graduate students. These reviews on academic achievement and post-academic performance generally have concluded that post-performance is difficult to determine from grades and assessment measures such as aptitude tests.

CHAPTER THREE

DESIGN AND PROCEDURES

3.1 INTRODUCTION

This chapter describes the design (methodology) of the study and procedure to be employed, including the sample selected for investigation, the test instruments to be investigated, the data collection procedures, the statistical methods employed in the analysis of the data, and the hypothesis statements formed to determine the relationships between the predictor variables with the criterion variable.

3.2 SAMPLE SELECTION

In order to conduct the empirical research, the researcher undertook field study to collect the data related to research at the Assessment and Evaluation Office, King Fahad University situded at Daharan, Easter province of Saudi Arabia. Data were collected from the academic record of the Assessment and Evaluation Office. These data consist of High School Total score (HSTS), under graduate grade point average (UGPA), graduate point average (GPA), final dossier rating and final interview rating and other applicant factors present at admission to degree level. When the researcher put the data in the SPSS package for analysis the results were problematic. There were serious problem which made the data unusable.

In view of the above, the researcher made another attempt and collected data via e-mail from the Assessment and Evaluation Office, King Fahad University, Saudi Arabia. Variables of these data were as under:

1. High School Percentage
2. High School Total
3. High School Math
4. High School Chemistry
5. High School Physics
6. High School English
7. RAM1 Total
8. RAM2 Total
9. RAM2 Math
10. RAM2 Chemistry
11. RAM2 Physics
12. RAM2 English

Sample of the data is collected is appended in the Appendix-I. But unfortunately these data were also problematic hence rejected. As a result, as per the suggestion of the supervisor of the research, data used in the present study from the readily data made available from the school of Education, University of Durham.

3.3 SAMPLE SUBJECTS AND SIZE

Fitz-Gibbon (1995) argued that education is a highly complex system and simple attempts to describe 'good schools' or 'effective practices' were misjudged. It required sensitive systems of performance indicators that were used to feed back information to the producers of education at local level, who could advance their own development. Fitz-Gibbon (1995) rejected the system to evaluate education institutions (schools) from 'outside' of the educational system as practiced in the office of standards in Education (OFSTED) model, and rejected associated fear based systems. Fitz-Gibbon recommended the self-evaluating educational systems such as A-Level Information System (ALIS), which currently involved many schools and colleges in United Kingdom.

This study is made based on readily accessible forms of data and work done by Fitz-Gibbon (1995) and Tymms (1995).

Tymms (1995) observed that this study involved students who had taken their 'A' Level examination in 1988 and they were followed up in 1993. The students who took part in 'A' Level Information System

(ALIS) (Fitz-Gibbon, 1985, 1990, 1992) and had completed a questionnaire towards the end of their 'A' Level courses. As stated by Fitz-Gibbon (1996), A-level Information System (ALIS) project covered five North-Eastern Local Education Authorities in England and they took a sample of 2578 students who took part in the survey. 1167 students completed the questionnaire and had agreed that researcher could contact them later. The response rate was 47% of those who were sent questionnaire. However, it needs to be mentioned that in the research process a number of students dropped out (not joined in the graduation programme of the university) from that sample data1167.

3.4 SELECTION OF VARIABLES

3.4.1 PREDICTORS VAIABLES

The following predictors variables were used for statistical analysis:

- AVO: The mean grade achieved by the students at O level. (Grade A= 7, B=6, etc).
- LSE (Likelihood of staying in education): Students were asked to complete the Questionnaires about their likelihood of staying in education at the time of their A-level. It is rated from six points scale.
- A-Level: Total A-level point score. Each A-level was rated from six points scale for each subject (-2 to 10).

- HOH (Head of the Occupation of the House): It is rated from the five scales. (5= professional, ……., 1= Unskilled).

3.4.2 CRITERION VARIABLE

To compare among the predictors variables with criterion variable; Degree Class has been selected as criterion variable in this study. It is rated from the six scales (0=fail, 1=pass, 2= 3rd, 3=2:2, 4=2:1, 5=1st).

3.5 STATISTICAL ANALYSIS

The overall purpose of this study is to investigate relationships between variables, it is considered as correlation research. Statistical evidence of the existence and strength of relationship between the predictor and the criteria measures was of major concern of this investigation. Following two procedures used in the data analysis:

- Simple correlation and regression
- Multiple correlation and regression

3.5.1 SIMPLE CORRELATION AND REGRESSION

A simple correlation is a mathematical measure of a relationship between two variables. The Pearson Product- moment correlation coefficient is the most frequently implemented index of predictive validity.

A correlation may be expressed on a continuum ranging from +1.00 to -1.00. A coefficient of +1.00 indicates a perfect positive relationship. This means that on two measures the highest on predictor measure (X) was also highest on criterion measure (Y). A coefficient of -1.00 indicates a perfect negative relationship. This means that the subject who scored highest on predictor measure (X) scored lowest on criterion measure (Y). A coefficient of zero means that there is no systematic relationship between the two sets of scores.

In this study, the Pearson Product-moment correlation coefficient was used to indicate whether there was a statistically significant relationship between each predictor and a criterion. There are four predictors against the main criterion (degree class). Those predictors are the mean grade achieved by students at O level (AVO), the students' likelihood of staying in education (LSE), the Heads of the House (HOH) and the Total A-Level.

The square of the correlation coefficient (r^2), which is called a coefficient of determination, is used to express the proportion of variance of the criterion determined or accounted for by the predictor.

The simple linear regression model is fundamental to prediction research. The basic equation of simple linear regression is

$$\hat{Y} = a + bX$$

Where $\hat{Y}$ =The predicted scores of the criterion

a = The intercept

b = The slope of the regression line

X = Scores of predictor.

Based on the validity coefficient and the standard deviation of the criterion, the criterion score can be predicted within a certain confidence interval by using the standard error of estimate,

$$S_e = S_c\sqrt{1-r^2}$$

Where S_e = Standard error of the estimate

S_c = Standard deviation of the criterion

r^2 = Coefficient of determination

The standard error of estimate depends on two quantities: (1) how spread out standard deviation of the criterion is and (2) how strongly the predictor and the criterion correlate. If the validity coefficient of the predictor and the criterion is perfect relationship, there is no error of prediction, and the standard error of estimate will equal zero. The closer the validity coefficient gets to zero, the less accurate prediction become and the larger the standard error of estimate.

3.5.2 MULTIPLE CORRELATION AND REGRESSION

Multiple correlation coefficient (R) estimates the relationship between the combination of two or more predictors and a criterion. In this study multiple correlation was used to test (1) The relationship between the criterion of success (Degree Class), on the one hand, and the combination of (AVO) and (HOH); (Total A-Level) and (HOH); (AVO) and (LSE); (AVO) and (Total A-Level); (LSE) and (Total A-Level), on the other. (2) The relationship between the criterion of success (Degree Class), on the one hand, and the combination of (AVO), (Total A-Level) and (LSE); (AVO), (Total A-Level) and (HOH); (AVO), (Total A-Level), (LSE) and (HOH), on the other.

In multiple regression a major purpose of adding one or more predictors in the regression equation is to increase accuracy of prediction; in another way, to reduce deviation from prediction. The simple linear regression from only one predictor included an amount of error. This error can be reduced by using more predictors in the multiple regression equation. For example, (Degree Class) may be predicted from (AVO), (HOH), and (LSE).

3.5.3 STEPWISE MULTIPLE REGRESSION

Including all predictors in a multiple regression equation can be misleading because many predictors might overlap and inter-correlate. There are several statistical methods for finding the best combination of independent variables to be introduced in the multiple regression equation with the maximum accuracy. These are direct regression, forward regression, backward regression, and stepwise regression. The stepwise method is the most commonly used technique (Pedhazur, 1982).

In stepwise method, independent variables are introduced in the regression equation step by step. The best predictor which explains most of the criteria variance is first in the regression equation. Then the second best predictor is added to the equation, given that the first predictor is already in the equation. Then the third best predictor is found and added to the equation. It continues doing this until the desired number of predictors is reached or no more significant variables can be added.

Pedhazur (1982) stated that the prediction equation calculated from the first prediction variable is designed to yield the highest possible correlation between the predictor variables and the criterion. And when this prediction equation is used to predict the criteria scores of another sample, the relationship between the predictor and the actual criterion scores of the new sample will be probably smaller than the relationship obtained in the sample from which the equation was originally calculated. The difference between predictor variables and the criterion for the original sample and for the second sample is called 'shrinkage'. The best procedure to estimate the amount of shrinkage is called cross-validation.

Randenbush (1994) argued that when researchers employ an analysis based on very large number of explanatory variables, relying on empirical inclusion rules to trim the model down so that variables can be managed. They can be mistaken, ultimately there is no substitute of using reason for explanatory variables.

There are many biased statistical literatures which induce the 'preliminary testing' that the absolute values of final regression co-efficients are very large and standard errors small which can be demonstrated analytically. It may be confirmed by many studies on the Shrinkage of regression co-efficients under cross-validation. Pedhazur

(1982) explained this method as follow: "(cross-validation) is done by using two samples. For the first sample a regular regression analysis is performed and R^2 (Squired multiple Correlation) and the regression equation are calculated. The regression equation is then applied to the predictor variables of the second sample, thus yielding $\hat{y}$ for each subject. The first sample is referred to as the screening sample, and the second as the calibration sample.

A Pearson r then calculated between the observed criterion scores (Y) in the calibration sample and the predicted criterion scores ($\hat{y}$). This r y $\hat{y}$ is analogous to multiple correlation in which the equation used is the one obtained in the screening sample. The difference between R^2 the screening sample and R^2 the calibration sample is an estimate of the amount of shrinkage" (Pp 151).

By using a cross-validation method, the researcher is in a stronger position to generalise the research findings and to apply them to the students (populations) other than the one from which the study subjects are drawn.

It should be noted that statistical procedure always can not be enough in regression analysis. Some theoretic reason should inform the creation of models.

3.6 THE STATISTICAL TOOL EMPLOYED IN THE STUDY

The SPSS (Statistical Package for the Social Sciences) was used in the analysis of data gathered from the questionnaires. The researcher used the statistical tests for the four groups (AVO, LSE, Total A-Level, HOH) which were appropriate for data.

3.7 NULL HYPOTHESES

The null hypotheses were stated in the style of relationships between variables in this study because the correlation coefficient was the main statistical instrument. The following hypotheses were tested:

Hypotheses 1: There is no significant relationship between the criterion (Degree Class) and the following predictors:

A. AVO
B. A-Level
C. LSE
D. HOH

Hypotheses 2: There is no significant relationship between the criterion (Degree Class) and the following combination of predictors:

A. AVO and A-Level
B. AVO and LSE

C. AVO and HOH

D. A-Level and LSE

E. A-Level and HOH

F. LSE and HOH

Hypotheses 3: There is no significant relationship between the criterion (Degree Class) and the following combination of predictors:

A. AVO, A-Level and LSE

B. AVO, A-Level and HOH

C. AVO, A-Level, LSE and HOH

CHAPTER FOUR

STATISTICAL RESULT

4.1 INTRODUCTION

The results of the data analysis are presented in the following order:

1. Descriptive measures.
2. Correlational Analysis.
3. Multiple Regression Analysis.
4. Stepwise Approach to Multiple Regression
5. Analysing Residuals.

This study examined the predictive validity of AVO, LSE, HOH and Total A-level. Graduate level (degree classification) was used as the criterion variable. Pearson correlation coefficients were computed for data from the ALIS project students at UK. Predictions using AVO, LSE, HOH and Total A-level were examined by calculating the mean error of prediction of the students in GCE, A-level and Graduate level. The result from these statistical procedures are summarised and analysed in this chapter.

4.2 DESCRIPTIVE MEASURES OF SAMPLE DATA

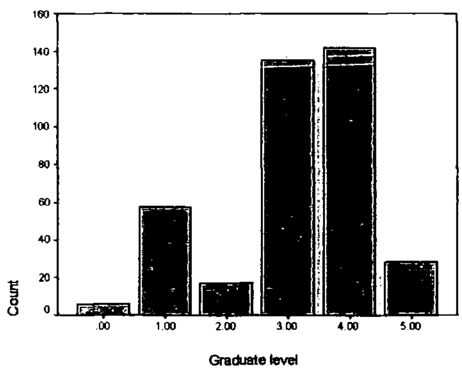
A summary of the means and standard deviations of sample variables of each group is shown in Table-2. The size of the sample was reduced for each variable to include only those variables, which we get up to graduate level, obtained on that variable.

Table-2: Means and Standard Deviations of Sample Data

Variable	Mean	SD	n
AVO	5.64	0.66	366
LSE	3.6	1.40	350
TOTAL A-LEVEL	8.6	5.06	378
HOH	4.2	1.24	347
GRADUATE LEVEL	3.13	1.19	385

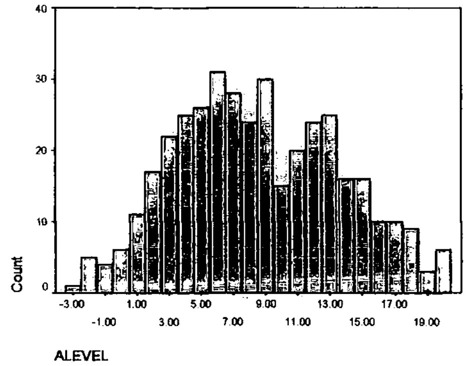
The distributions of the variables are shown below:

Figure 3: The distribution of the criterion variable (Degree Class)



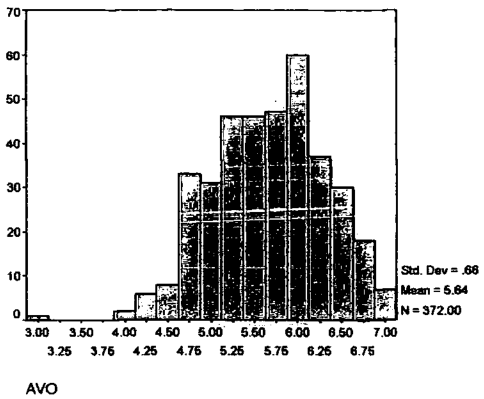
The degree class was dominated by second-class degrees with quite a few pass degrees. First, thirds and fails were relatively uncommon.

Figure 4: The distribution of Total A-level predictor



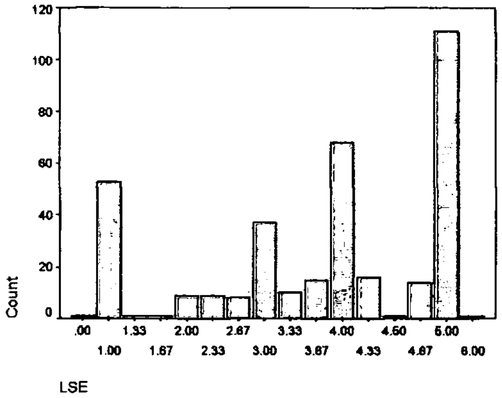
The total A level scores were approximately normally distributed.

Figure 5: The distribution of AVO predictor



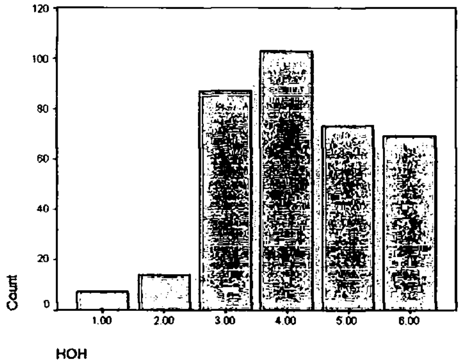
The average O level grades were approximately normally distributed although a very small number of students had a very low score.

Figure 6: The distribution of LSE predictor



The LSE distribution showed a mode at the maximum score. Many students had a very low score and the rest had scores nearer the middle. The distribution is nearly U shaped.

Figure 7: The distribution of HOH



As expected the HOH variable was dominated by high scores but there was a good spread

4.3 SIMPLE CORRELATION

The Pearson product- moment correlation coefficient is a basic statistic and represents the classical model for presenting the relationship between the two variables. In this study, the Pearson product- moment correlation coefficient was used to indicate whether there was a statistically significant relationship between each predictor and the criterion (Degree Class).

Table 3: The validity coefficients and prediction equations of the predictors against the criterion (Degree Class)

Predictors	r	r^2	Se	a	b	N	P
AVO	0.26	0.07	1.15	0.535	0.460	371	<0.000
LSE	0.27	0.07	1.13	2.351	0.222	354	<0.000
HOH	0.02	0.00	1.18	3.037	0.020	352	0.692
Total A-level	0.37	0.14	1.11	2.385	0.086	383	<0.000

The Table 3 displays the validity coefficients of predictors (AVO, LSE, HOH and Total A-Level) against the criterion (Degree Class). The first column indicates predictors. In the second column are the validity coefficients (r). The Table 3 shows that the criterion (Degree Class) had correlation of 0.26, 0.27, 0.02 and 0.37 with AVO, LSE, HOH and Total A-Level respectively. The Table 3 shows that the best predictor was Total A-Level. HOH had the lowest validity of any predictor.

The squared correlation coefficients (r^2), which are called the coefficients of determination, are presented in the third column. It indicates the extent to which AVO, LSE, or HOH accounted for the variation in the criterion (Degree Class). These indices of determination are more useful for comparison than the indices of correlation. Thus, from the Table 3, 14 % of the variability in the criterion is explained by the total A-level. AVO accounted for Degree Class variation as much as LSE. And zero percent of the variance of the criterion (Degree Class) is determined by HOH.

The slope (b) and the intercept constant (a) are shown in the fifth and sixth columns. These are important in connection with the regression equation. The formula for simple regression equation is: Y= a+b X. for example, a student's Degree Class can be predicted form knowledge about his AVO score by using the formula above with values in Table 3:

$$\text{Degree Class} = 0.535 + 0.460\ (\text{AVO})$$

The fourth column of Table 3 presents the standard error of estimate (Se). It indicates the margin of error around the estimated criterion and can be computed from this formula SE = $S \sqrt{1 - r^2}$ .Table 3 shows the correlations of HOH, AVO, LSE, and Total A-Level against the criterion of success were 0.02, 0.26. 0.27, and 0.37, respectively. The standard errors of estimating the criterion from these predictors were 1.18, 1.15, 1.13 and 1.11, respectively. This shows that as the correlation increased, the standard errors of estimate decreased.

The standard error of estimate can be used to set confidence limits around a predicted score. From Table 3, the standard error of estimate in predicting Degree Class scores from AVO scores is 1.15. For 68% confidence interval of the estimated Degree Class, the SE in the fourth column was added and subtracted from the estimated Degree class: Degree class ± 1.15. The smaller the magnitude of Se, the more accurate is the prediction results.

As indicated in the eighth column, the simple correlations between the criterion; on one hand; and Total A -Level, LSE, and AVO; on the other hand; are statistically significant beyond the 0.0005 probability level. The simple correlation between the criterion and HOH is not statistically significant ($p>.05$).

N in the seventh column represents the number of subjects on which the statistical analysis was based. Because not all students had complete information for all variables, the sample size differed from one variable to another. It was also considerably less than the original sample of students because not all students completed degree courses.

4.4 MULTIPLE CORRELATION AND MULTIPLE REGRESSION

So far the simple correlation and simple regression have been computed between each predictor and criterion. The unexplained variance of a criterion when a single correlation is used may be treated as an error. However, the part of this unexplained variance can be accounted for, if more than one predictor is used. Further it can be stated that the amount of error variance i.e. residual, $1-r^2$ can be reduced to the extent that more information may be added. Multiple correlation is a procedure that combine more than one predictor and thus provide more precision in the prediction process. Because of their importance, the predictor variables (AVO, LSE, HOH and A-level) were made in multiple regression in various combinations against the criterion variable and are presented in Table 4A, 4B, 5A, 5B, 6A, 6B, 7A, 7B, 8A, 8B, 9A, 9B, 10A, 10B, 11A, 11B, 12A, 12B, 13A, 13B, 14A, 14B in a phase of manner.

In the previous paragraph of the simple correlation, it was discussed that the best predictor was A-level which provide a coefficient (r) of 0.37. In multiple correlation adding AVO, LSE and HOH to Total A-level did not improve the prediction of the criterion of success. The combination of Total A-level and AVO had a multiple correlation (R) of 0.36; Total A-level and LSE had an R value of 0.36 as well. The combination of Total A-level and HOH had not improved the prediction power; provide a multiple correlation 0.33. The Total

A-level alone accounted for about 14 percent of the variance of criterion. While adding the HOH with the regression equation, the amount of the variance of the criterion accounted for by Total A-level and HOH was about 11 which indicate decrease 3%. The decreased is probably the result of a changed sample because of missing data.

The following represent the result of multiple regression of correlation of A-level and AVO; A-level and LSE; A-level and HOH against the criterion variable Graduate level are presented in the table No. 4A, 4B, 5A, 5B, 6A, 6B respectively.

Table 4 A :.THE MULTIPLE CORRELATION OF A-LEVEL AND AVO:

	R	*R^2*	*SE*	*P*
A-level&AVO	0.36	0.13	1.11	.000

Table 4 B : THE MULTIPLE CORRELATION OF A-LEVEL AND AVO:

	a	*b*	*B(β)*	*P*
Constant	1.96			
AVO		0.0926	0.051	0.421
A-level		0.0763	0.324	0.000

N.B. Tables No. 3 to Table No. 10, b or B (β) indicate each predictor's weight in the total regression equation.

Table 5 A: THE MULTIPLE CORRELATION OF LSE AND A-LEVEL:

	R	R^2	*SE*	*P*
A-level&LSE	0.36	0.13	1.10	.000

Table 5 B : THE MULTIPLE CORRELATION OF LSE AND A-LEVEL:

	a	*b*	$B(\beta)$	*P*
Constant	2.24			
LSE		0.0954	0.114	0.053
A-level		0.0661	0.282	0.000

Table 6 A: THE MULTIPLE CORRELATION OF HOH AND A-LEVEL:

	R	R^2	*SE*	*P*
A-level&HOH	0.33	0.11	1.11	.000

Table 6 B : THE MULTIPLE CORRELATION OF HOH AND A-LEVEL:

	a	*b*	$B(\beta)$	*P*
Constant	2.58			
HOH		0.0317	-.033	0.514
A-level		0.0797	0.335	0.000

Apart from this, the combination of AVO and HOH also decreased the predictive power of AVO alone which produce a multiple correlation of 0.25. The combination of HOH and LSE also decreased the predictive power of

LSE alone and produced multiple correlation of 0.26. However, the multiple correlation of AVO and LSE was 0.30. This has increased the predictive power of LSE or AVO alone by 2% which indicate that LSE did not add much to AVO. These are indicated in the Table No.7A, 7B, 8A, 8B, 9A, and 9B.

Table 7A: THE MULTIPLE CORRELATION OF HOH AND AVO:

	R	R^2	*SE*	*P*
HOH&AVO	0.25	0.06	1.14	.000

Table 7 B : THE MULTIPLE CORRELATION OF HOH AND AVO:

	a	*b*	*B(β)*	*P*
Constant	0.701			
HOH		-0.0326	-.034	0.519
AVO		0.454	0.253	0.000

Table 8 A: THE MULTIPLE CORRELATION OF HOH AND LSE:

	R	R^2	*SE*	*P*
HOH&LSE	0.262	0.07	1.13	.000

Table 8 B : THE MULTIPLE CORRELATION OF HOH AND LSE:

	a	*b*	*B(β)*	*P*
Constant	2.476			
HOH		-.0311	-.033	0.542
LSE		0.220	0.267	0.000

Table 9 A: THE MULTIPLE CORRELATION OF LSE AND AVO:

	R	R^2	*SE*	*P*
LSE&AVO	0.30	0.09	1.12	.000

Table 9 B : THE MULTIPLE CORRELATION OF LSE AND AVO:

	a	*b*	*B(β)*	*P*
Constant	0.978			
LSE		0.157	0.188	0.001
AVO		0.285	0.159	0.007

As noted earlier the b in the fourth column represents the regression weights of the predictors in the raw scores. For example, a student's Degree Class can be predicted from the knowledge about his Total A-level and AVO score by using the following formula from Table 4B:

Degree Class = 1.96 + 0.076 (A-level) + 0.092 (AVO)

The B(β) sign in the fifth column, on the other hand, represents the regression weights of the predictors in the standardised form. This standardised beta (β) serves the following purposes:

(1) It shows the relative contribution of each predictor - in the multiple prediction equation - in a comparative manner. Unlike the b (substandard beta), the magnitude of B (standard beta) is not affected by the scale measurement used by the predictor variables. In Table 4 to 9, for example the B column indicates that all the variables means; AVO, LSE, HOH and A-level contributing in predicting the criterion variable i.e. Graduate level.

(2) The regression weights in the b column can be used to estimate the criterion raw score, the regression weights in the B column can be used to

predict the criterion (z) or standard score. For instance, a student's degree class can be predicted from knowledge about his A-level and AVO score in standardised score by using the prediction equation from Table 4B:

z degree class = B A-level (z, A-level) + B AVO (z, AVO)

= 0.324 (z, A-level) + 0.051 (z, AVO)

The coefficients in this equation indicate that A-level is considerably more important than AVO as a predictor.

The R or R^2 terms and the standardised beta (B) term are important in interpreting the multiple correlation. R or R^2 shows the value of the incremental validity or the increment in the criterion variance that the variable made over the single predictor. On the other hand 'B' weights, indicate the relative contribution of each variable in the model on equal basis.

Table 10 A: THE MULIPLE CORRELATION OF LSE, AVO AND A-LEVEL:

	R	*R²*	*SE*	*P*
LSE&AVO,A-LEVEL	0.36	0.128	1.10	.000

Table 10 B : THE MULTIPLE CORRELATION OF LSE, AVO AND A-LEVEL:

	a	*b*	*B(β)*	*P*
Constant	1.950			
LSE		0.0892	0.107	0.079
AVO		0.0616	0.034	0.608
A-LEVEL		0.0619	0.264	0.000

In Tables 10-14 the b, B and p values refer to the coefficients in the models. For example in Table 10 the final regression equation is Degree class = 1.95 + 0.089 * LSE + 0.061 * AVO + 0.061 * A-level

Table 11 A: THE MULTIPLE CORRELATION OF HOH, A-LEVEL AND AVO:

	R	*R²*	*SE*	*P*
LSE&AVO,A-LEVEL	0.34	0.11	1.114	.000

Table 11 B : THE MULTIPLE CORRELATION OF HOH, A-LEVEL AND AVO:

	a	*b*	*B(β)*	*P*
Constant	2.030			
HOH		-.03914	-.041	0.427
A-LEVEL		0.06993	0.294	0.000
AVO		0.118	0.066	0.322

Table 12 A: THE MULTIPLE CORRELATION OF LSE, HOH AND A-LEVEL:

	R	*R²*	*SE*	*P*
LSE, HOH, A-LEVEL	0.34	0.118	1.105	.000

Table 12 B : THE MULTIPLE CORRELATION OF LSE, HOH AND A-LEVEL:

	a	*b*	*B(β)*	*P*
Constant	2.430			
LSE		0.108	0.131	0.033
HOH		-.0497	-0.052	0.318
A-LEVEL		0.0625	0.262	0.000

Table 13 A: THE MULTIPLE CORRELATION OF LSE, HOH AND AVO:

	R	R^2	*SE*	*P*
LSE&AVO, HOH	0.30	0.088	1.12	.000

Table 13 B : THE MULTIPLE CORRELATION OF LSE, HOH AND AVO:

	a	*b*	*B(β)*	*P*
Constant	1.139			
AVO		0.292	0.163	0.007
HOH		-.05173	-.055	0.311
LSE		0.158	0.191	0.002

Table14 A: THE MULTIPLE CORRELATION OF A-LEVEL, HOH, LSE AND AVO:

	R	R^2	*SE*	*P*
A-level,HOH,LSE, AVO	0.35	0.119	1.106	.000

Table 14 B : THE MULTIPLE CORRELATION OF A-LEVEL, HOH, LSE AND AVO:

	a	*b*	*B(β)*	*P*
Constant	2.059			
A-LEVEL		0.05696	0.239	0.001
AVO		0.08180	0.046	0.509
LSE		0.100	0.122	0.053
HOH		-.05388	-.057	0.284

The Table 10 to 14 suggest that, in comparison to the single correlation model, using multiple correlation of AVO, LSE, HOH and A-level does not increase the predictive power of (Degree level) criterion variable. Table 10 through 13 presented the multiple correlation of three predictors. In practice the result indicated that using three predictors produced lower validity coefficient. From Table 10 the multiple correlation of A-level, LSE and AVO against the Degree class was 0.36. From Table 11, the multiple correlation of A-level, HOH and AVO was 0.34. Similarly Table 12, the multiple correlation of A-level, LSE and HOH was 0.34. Table 13, the multiple correlation of AVO, HOH and LSE (Excluding) Total A-level was 0.30. In Table 14, the four composite predictors were used. The result indicated that the multiple correlation of four predictors produced lower validity coefficients. The combination of these four predictive power, producing correlation of 0.35. As indicated in the seventh column, all the multiple correlations in Table No.4 through 14 are statistically significant beyond the 0.0005 probability level.

4.5 STEPWISE APPROCH TO MULTIPLE REGRESSION

The above stepwise multiple correlation approach was used to produce the maximum power with minimum number of variables. Table 15 shows the results of analysis using the predictors (AVO, HOH, LSE & A-level) against Degree Class in stepwise method; i.e. the best predictor entered first, the second best predictor followed. In the stepwise multiple regression against the criterion variable, variables were extend when the probability to enter was < = .05 and probability to remove was >=.1.

Table 15 : Stepwise multiple regression of A-level, LSE, HOH and AVO against Degree Class criterion variable. N= 338

First Step:

	a	*R*	R^2	*SE*	*P*
Constant	2.48				
A-level		0.32	0.104	1.11	0.000

Second and last step:

	a	*R*	R^2	*SE*	*P*
Constant	2.48				
A-level&LSE		0.34	0.115	1.10	0.000

Inspection of Table 15 shows that according to Table 14 HOH and AVO was lowest predictor among the four predictor variables of this study against criterion variable. The first variable to enter the equation was A-level followed by LSE. The value of R rose from 0.32 to 0.34.

In stepwise regression, the preference of a variable depends on two factors: how predictive it is and how much overlap it has with the already entered variables. The higher the validity coefficient and the less overlap with the previous selected variables, the greater the chance of its being preferred in the stepwise analysis.

Although some predictors were preferred over others and entered into the equation earlier, the magnitude of their contribution could change when other variables are entered later.

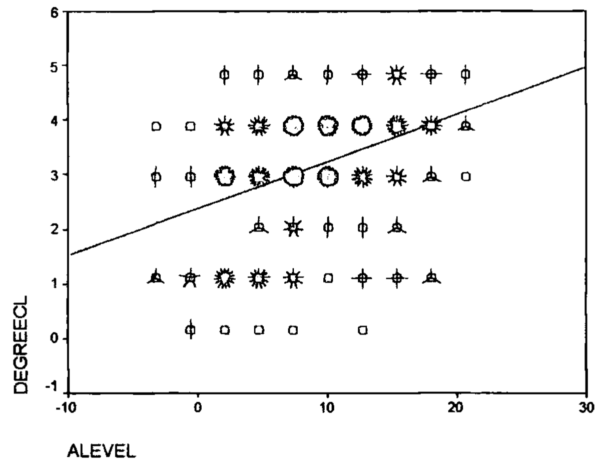
It should be noted that in the first step R was 0.32, this lower than the r reported in Table 3. This is because SPSS reduced the sample to include students on whom there was a full set of data. In these circumstances the prediction of the degree class improve marginally by the addition of LSE to the equation.

4.6 ANALYSING RESIDUALS

In the estimation of linear regressions, it is important that the assumptions of the linear regression model are met. Most of the assumptions (linearity, normality, and constant variance) centre on the regression residuals i.e. the difference between the observed and the predicted values of the criterion ($Y - \hat{Y}$). A violation of any of these assumptions per the residuals would undermine the regression results.

The assumption of linearity in the linear regression model is also very important. An inclusion of a squared or cubed independent variable in the regression model tests for non-linearity i.e. it is expected that the statistical significance of these variables would signify non-linearity. If the null hypothesis H_0: coefficients of squared & cubed coefficients = 0 is rejected, then it can be said that the assumption of linearity is violated, and therefore the relationship between the two variables is best modelled by a non-linear regression model.

Figure 8: The scategrame of Total A-level and Degree Class



The scategrame in Figure 8 suggests that there might be a non-linear relationship between A-level and Degree Class.

From the model:

$\text{Degreeclass} = a + b_1 \text{ alevel}$ ....(1)

Squared and cubed variables of a-level are included such that:

$\text{Degree class} = a + b_1 \text{ alevel} + b_2 \text{ alevelsq} + b_3 \text{ alevelcb}$ ..(2)

Therefore, give the previous reasoning, if the null hypothesis coefficients of squared & cubed variables are rejected through the t-test, it can be said that the variables and data are best modelled by a non-linear model, otherwise if the null is not rejected, linearity can be assumed (thus a correct functional form for the model (1)).

Table 16:The excluded variables of the stepwise multiple regression of A-level, A-level squared and A-level cubed

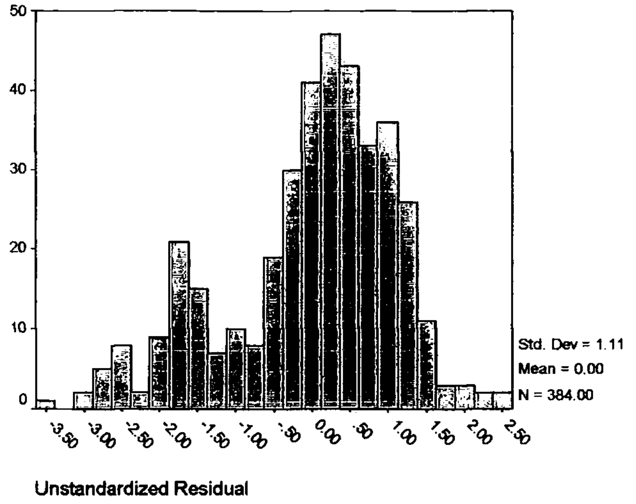
	B(β)	t	P
A-level Squared	-0.289	-1.872	0.062
A-level cubed	-0.167	-1.647	0.100

From the t-statistics in Table 16, the null hypotheses can be rejected at the 5% level of significance. Thus the assumption of linearity is satisfied even though visual inspection of Figure 8 suggests a curve.

The second important assumption is normality. If the relationship is linear and in the population the criterion variable is normally distributed for each value of the predictor variable, then the distribution of the residuals should also be approximately normal.

From the figure 9, it can be seen that the distribution of the residuals appears to be fairly normal. However, there is some indication of a bimodal distribution. This in no surprising given the scattergam shown in Figure 9. If more data were available and the same patterns were produced it is expected that a non-linear regression would be more appropriated.

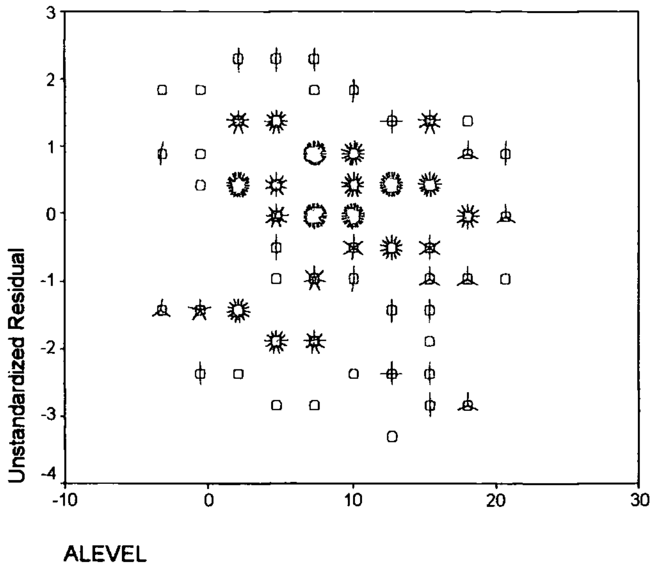
Figure 9: The distribution of unstandardized residual



Finally, Constant variance can be checked by plotting the residuals against the values of the predictor variable. If the spread of the residuals increase or decrease either with the values of the predictor, it can be said that the variance is not constant.

From the figure 10, it is not appearing to be much of a pattern to the spread of the residuals. Therefore, the variance is accounted to be constant.

Figure 10: The scattergram of Total A-level and Unstandardized residual:



4.7 DISCUSSION

Usually, there are two important aspects of correlation coefficients considered in interpreting their results: (1) their statistical significant and (2) their magnitude. In a study, when sample size is large (our sample size is relatively low), statistical significance is not a problem as per convention, when with a low- magnitude correlation. All of the simple correlations for the total sample in this study were statistical significant beyond 0.05 except one. The statistical significance aspect is important to ensure that the computed results are not the result of a sampling error and to indicate that a certain level of relationship different from zero actually exists between the correlated variables. Statistical significance is necessary but not sufficient condition for the value of the results, particularly when these results are to be used for the practical purposes.

Magnitude is the other aspect of correlation coefficient that has bearing on theoretical research and adds to the practical value of research results. The meaningful significance of the validity coefficient is specific to the research objectives and to the field of practice. In this study, there was no generally accepted level of validity. The meaning of these results can be judged by comparison to the literature review. When compared to the previous research, this study revealed similar findings about the predictive power A-level scores against Degree level. The research literature indicated that the correlation coefficient between high school grades or ranks and first year of college GPA ranges from .50 to .55 (Astin, 1971, Linn, 1982; Mehrens, 1982); this study showed a multiple correlation in the A-level against Degree level criterion (i.e. 3 years later) was .37.

In this study, implementing the simple correlation coefficient was intended to determine the value of each single variable for prediction. In the present study predictors (AVO, LSE, HOH & A-level in England) were either equal to or higher than their American counter predictors in their correlation to criterion variable Degree level. The best predictor seems to be A-level alone or A-level with LSE but the combination were generally not better than A-level alone. This phenomena may be partly attributed to the overlap between LSE and A-level. The correlation between two was found to be 0.34. Multiple correlation is best with variables exhibiting the highest correlations with the criterion measure and lowest intercorrelations among themselves. The multiple correlation of LSE and A-level against criterion variables from 0.34 for LSE alone to 0.30.

All the variables from both stages were used in stepwise multiple correlation to select the best combination of predictors with maximum power. From the stepwise analysis:

1. Best predictor was A-level, whereas LSE emerged in the second position.
2. The method yielded the maximum predictive validity with smaller numbers of predictors than the total number used.

Stepwise regression analysis is an efficient method in prediction research because it offers maximum predictive validity with the fewest variables. However, the results of the stepwise regression, in particular, and multiple correlation, in general, may be misinterpreted. Therefore, it is necessary to address the issue of interpretation of the study result.

The difference between explanatory and predictive research must be distinguished. Does the researcher want to examine prediction of success, does he/ she want to judge the value of each variable in predicting success? Or does he/she want to know how much and why each variable predicts success? Although stepwise method is the best answer to the first question, seeking the answer to all of the questions through that method may be misleading. In this stepwise analysis, inclusion of variables was based on pure statistical selection; other important theoretical or practical aspects were not considered. The basic principle of this method is that a variable with high correlation with the criterion and low correlation with predictors has a better chance of being selected. By depending solely on the stepwise table, one may erroneously conclude that only the listed variables are related to the criterion and that the variables left out of the equation are useless. To judge the predictive value of a predictor, it must be examined individually (simple correlation), as well as in combination with other variables. In comparing the contribution of the variables within stepwise equation, the standard beta [(β) regression] weights are more valuable than just the stepwise order; however, may be used differently by various researchers.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 SUMMARY

Generally Colleges and Universities accept only a limited number of applicants for two main reasons; (i) The Institutions are not capable of accommodating all the applicants and (ii) they believe that prospective students must possess certain qualifications to complete the Degree course successfully. Ethical and legal considerations have surrounded the issues of selection and rejection, such decisions should be based on objective and scientific grounds. Beyond the legal aspects, scientific and objective selection devices can serve both the Educational Institution and the students' interests. Good assessment devices enable the Educational Institutions and students to evaluate their capacities, to plan their futures, and to avoid possible failure as objectively as possible.

This study was designed to investigate the question about the Degree performance which was influenced by the A-level, AVO, HOH & LSE variables or not and the relationship with these variables. Further the study was also designed to investigate the predictive validity of the selection measures used in the A-level Information Project in England. Assuming that the purpose of selection measure at Degree level is to identify potentially successful students, a certain relationship between the selection measures and success measures at the Degree level should exist. We can say that the selection variables should demonstrate what is called predictive validity in order to serve their intended purpose.

The researcher used the following variables

1 AVO
2 LSE
3 HOH
4 Total A-level
5 Degree course was used as criterion variable.

The main body of the validation study was based a sample of students who agreed to complete the questionnaire and sent reply to the A-level Information System (ALIS) project which covered five North-Eastern Local Education Authorities in England. The Simple Pearson Product-Moment correlation co-efficent was used to test the main hypothesis regarding the predictive validity of each variable. Multiple correlation was also employed to extent the prediction of success to its maximum by combining as many of the available variable. A stepwise multiple-correlation approach was used to produce the maximum predictive power with a minimum number of variables.

5.2 CONCLUSION

Based on the data analysis, following conclusions were drawn:

1 Three variables were significantly predictive of academic success in terms of scholastic performance and persistence. HOH are not significantly related to Degree Class. The predictive power of HOH, AVO and LSE was low and moderately high for Total A-level. The null hypotheses were rejected beyond the 0.05 level except that for HOH.

2 The superior predictive power of A-level variable may have exist because the preparatory A-level programme is better suited to the Higher Education than other variables.

3 When all predictor variables were used in a stepwise multiple regression, a noticeable but small improvement in predictive power was evident; however, those variables having high correlations with the criterion and low correlations with other predictors are to be preferred in the stepwise equation.

4 Based on the literature review, it is to be expected that in the context of Saudi Arabia combining a school score with admission tests in multiple correlation would improve the predictive power and better explained the success variation of criterion measure than would either one alone.

5.3 LIMITATION OF THE STUDY

Several limitations of this study are shared by most predictive studies. One such limitation is the dependence on available data only on four variables AVO, LSE, HOH and Total A-level from the School of Education. Important details made for Math, English, physics, chemistry etc. Age and Sex of the students are factors that might influence or to be related to the dependent variables were not included in the study. The use of non-cognitive variables, such as, personality measures, social adjustment, ethnic background, may be related to the student's success, but since they do not exist in the file, it was impossible to include them. Further the Degree Class may itself be problematic. It would be interesting to look at the data subject by subject and university by university.

Another limitation of the study, resulting from the research being based on pre-existing data, is that researcher manipulation or control was not possible, thus, scientific explanation was limited and causal inferences were not warranted.

Third limitation that this research shared with prediction studies is a theoretical one. Error in predicting human behaviour is inevitable, regardless of the power of the predictors or the number of predictors involved. The many human factors responsible for successful performance make it possible to achieve certainly or an error-free prediction. Therefore, the main purpose of prediction inquiry in studies such as the present one is to reduce error rather than to eliminate it.

5.4 RECOMMENDATIONS FOR FURTHER RESEARCH

The following recommendations are made for further research.

(1) It is true that the performance and persistence of a student at Educational Institutions are functions of far more than his or her academic background. The non-intellectual variables and their relationship to success should be explored further. For example, what social and personal characteristics may be considered, the following questions may be posed.

(a) What is the relationship between the student's socio-economic status and his success? The present study only had data for the head of household.

(b) What is the relationship between the student's family size and parent education and his success?

(c) What is the relationship between the student's attitude toward his major, his/her teachers, and the Educational Institution in general and his success?

(2) Other universities outcomes other than degree classification should be consider. For example, student satisfaction, Inspirational level and self reported gains

(3) Although high school achievement (in this case GCSE) is an important predictor of success, future research in scientifically oriented universities should consider not only the high school (GCSE) and A-level total score but also the total score for science courses and the separate course for different subjects.

(4) Factors that affect a student's choice of a certain university or college major, and their influences in turn on a student's success, should be investigated.

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Appendix I:

The unusable data from King Fahad University, Saudi Arabia

Entrance Number	Ram 1 Tota	Ram2 English	Ram2 Physics	Ram2 Chenestry	Ram2 Math	Ram2 Total	High School English	High School Physics	High School Chemestry	High School Math	High School Total	High School Percentage
71165	54	10	13	8	20	50.5	66	68	66	204	1356	78.4
71862	56	4	12	3	30	49	65	81	85	296	1548	89.5
71280	56	7	9	10	22	47.5	68	76	86	280	1523	88.0
70257	55	15	6	3	13	37	78	65	80	228	1386	80.1
76234	57	7	13	3	19	42	64	59	70	184	1409	81.4
73951	70	13	11	10	27	61	87	88	86	272	1549	89.5
74111	83	8	14	7	23	52	80	76	80	232	1554	89.8
73737	59	5	6	5	14	30	66	58	75	185	1377	79.6
73719	59	4	10	4	14	31.5	61	62	61	229	1292	74.7
71757	69	15	16	13	23	66.5	87	78	82	199	1530	88.4
74223	68	18	8	4	18	48	89	81	82	260	1521	87.9
72388	78	18	16	18	37	89	89	95	94	299	1662	96.1
71996	55	7	12	7	17	43	78	89	92	267	1570	90.8
71945	57	10	12	6	6	33.5	87	71	78	171	1447	83.6
72240	46	9	14	10	31	64	90	93	98	286	1652	95.5
72709	89	20	16	8	30	73.5	93	94	92	258	1582	91.4
75185	55	9	6	2	14	31	83	71	88	224	1541	89.1
70527	57	6	11	7	23	46.5	51	81	94	264	1464	84.6
47483	60	8	10	3	19	39.5	80	85	80	279	1550	89.6
73783	57	7	5	5	17	33.5	83	75	70	211	1466	84.7
74392	77	16	9	5	26	55.5	88	64	83	233	1465	84.7
70042	65	12	16	5	34	66.5	91	88	90	230	1539	89.0
72856	59	4	8	10	13	34.5	69	87	86	255	1553	89.8
45309	40	4	8	2	18	32	80	92	82	269	1567	90.6
74165	72	11	17	8	36	72	87	91	98	300	1637	94.6
72922	61	17	16	3	36	71.5	95	98	98	281	1687	97.5
75053	54	17	13	15	25	69.5	95	89	100	273	1623	93.8
72923	70	3	10	6	23	42	54	54	59	242	1374	79.4
70895	57	7	7	6	22	42	70	74	84	233	1507	87.1
76237	64	9	14	11	25	58.5	79	76	74	196	1467	84.8
70583	67	9	12	7	12	40	68	61	62	208	1338	77.3
73781	56	6	8	10	17	41	74	78	85	257	1558	90.1
73659	69	20	17	3	37	77	96	99	100	300	1701	98.3
75661	60	4	8	5	23	40	78	58	77	220	1438	83.1
74295	60	8	8	7	11	34	60	66	67	167	1319	76.2
72008	60	7	12	9	28	56	65	78	87	276	1523	88.0
70535	61	7	8	2	16	32.5	63	69	64	206	1411	81.6
76588	57	11	13	10	22	55.5	84	82	93	250	1581	91.4
73420	26	7	5	3	12	26.5	71	62	69	234	1452	83.9

71936	67	3	15	7	31	56	75	83	90	289	1537	88.8
72834	49	12	13	4	20	48.5	93	81	84	268	1581	91.4
75407	60	4	3	3	10	19.5	85	81	70	253	1477	85.4
73217	78	19	17	10	26	72	86	89	91	292	1619	93.6
72931	62	7	8	6	16	37	80	86	95	266	1580	91.3
71899	65	5	12	7	28	51.5	73	77	92	266	1568	90.6
93219	49	4	5	7	12	28	80	81	83	221	1470	85.0
75533	64	7	12	4	28	51	75	69	82	266	1508	87.2
73140	54	11	10	7	26	53.5	85	94	90	251	1593	92.1
72558	51	10	6	4	22	42	90	88	79	245	1531	88.5
71671	69	7	13	9	27	55.5	65	73	68	241	1422	82.2
70332	68	3	11	3	21	38	58	64	72	186	1328	76.8
71182	60	4	12	10	26	52	82	71	93	269	1584	91.6
70671	65	3	10	7	17	37	82	79	81	255	1526	88.2
70170	60	6	7	5	10	27.5	67	59	69	184	1296	74.9
74639	75	11	13	6	23	53	88	50	57	188	1301	75.2
71831	57	10	12	11	24	56.5	90	88	97	275	1637	94.6
74186	79	14	13	5	21	53	92	90	92	285	1659	95.9
72844	60	5	10	11	20	45.5	71	75	81	265	1439	83.2
72319	66	6	8	1	18	32.5	74	69	74	203	1404	81.2
74091	70	16	10	6	22	53.5	93	77	93	240	1537	88.8
70422	60	11	15	3	21	49.5	93	96	100	283	1672	96.6
72634	63	17	11	1	26	54.5	93	89	84	254	1569	90.7
72480	54	5	13	8	5	30.5	77	77	71	186	1429	82.6
73556	59	10	15	12	29	65.5	83	74	77	283	1549	89.5
74084	57	5	8	8	10	31	73	63	88	206	1426	82.4
72047	71	7	6	6	26	44.5	73	90	19	266	1550	89.6
75567	62	7	7	3	13	30	75	69	72	196	1418	82.0
75373	73	5	10	14	16	45	64	77	82	199	1390	80.3
75077	55	4	13	6	17	39.5	62	85	100	266	1572	90.9
74693	66	18	13	15	17	63	88	82	74	241	1541	89.1
70817	58	10	10	4	17	41	80	86	82	258	1519	87.8
74470	69	8	15	8	33	64	78	94	90	277	1590	91.9
74495	75	9	12	4	29	54	87	97	96	279	1660	96.0
71580	53	12	13	3	28	55.5	81	91	93	276	1587	91.7
74837	63	20	15	4	30	68.5	98	95	94	280	1677	96.9
75047	59	11	12	3	22	47.5	81	88	82	254	1550	89.6
73799	58	15	11	11	16	52.5	68	62	52	201	1299	75.1
73549	69	11	11	4	28	53.5	82	92	98	296	1626	94.0
75116	72	8	11	10	13	41.5	75	50	67	164	1281	74.0
70767	53	9	9	5	6	28.5	79	66	78	250	1499	86.6
70834	40	8	10	6	20	44	85	91	100	257	1589	91.8
74694	56	15	11	11	34	70.5	85	85	79	277	1509	87.2
70404	63	4	10	6	26	45.5	80	78	79	272	1566	90.5

70188	60	8	11	3	21	43	86	82	85	239	1534	88.7
72279	54	8	7	2	18	35	62	53	59	242	1383	79.9
72131	61	13	11	9	27	59.5	77	66	64	231	1294	74.8
70156	61	7	12	3	20	41.5	79	80	87	276	1557	90.0
71944	57	6	9	3	8	25.5	63	60	60	180	1307	75.5
74734	69	14	8	5	26	53	84	63	71	234	1461	84.5
72626	57	4	9	3	20	36	63	53	64	189	1298	75.0
72496	59	19	14	3	27	62.5	94	87	87	266	1552	89.7
70414	55	5	7	9	15	35.5	59	61	61	191	1327	76.7
73819	56	8	8	4	12	32	75	65	60	154	1342	77.6
76282	66	7	14	4	34	59	86	95	93	292	1642	94.9
70173	75	15	18	5	36	74	95	97	98	299	1675	96.8
76454	57	8	14	11	27	59.5	88	99	97	293	1622	93.8
74471	62	8	9	5	21	42.5	73	84	67	201	1469	84.9
73243	71	6	11	4	26	46.5	72	81	84	268	1548	89.5
72114	77	16	14	5	29	63.5	91	82	83	247	1513	87.5
72780	63	9	13	8	15	45	71	55	61	208	1296	74.9
75103	81	13	9	6	10	37.5	83	70	85	256	1498	86.6
72010	67	11	11	6	21	48.5	81	79	81	227	1463	84.6
70533	62	7	11	5	23	46	73	75	72	238	1475	85.3
73261	67	20	10	7	20	56.5	87	90	95	280	1627	94.0
71078	76	20	18	6	33	76.5	92	92	92	294	1669	96.5
70181	53	18	9	6	28	60.5	96	83	82	217	1517	87.7
71342	47	10	6	6	17	38.5	89	77	94	264	1591	92.0
72273	76	20	15	5	34	73.5	97	95	86	292	1657	95.8
72535	69	14	14	4	30	62	80	84	83	266	1489	86.1
45815	54	7	3	6	13	29	75	85	76	229	1462	84.5
73426	57	7	13	4	22	46	65	78	84	259	1523	88.0
73986	59	6	9	2	12	28.5	73	77	87	181	1466	84.7
71560	64	5	11	2	16	33.5	63	73	77	228	1484	85.8
70501	66	7	10	6	16	39	71	81	79	256	1524	88.1
72097	53	12	14	7	20	52.5	79	81	89	257	1516	87.6
75086	57	8	10	3	20	40.5	68	50	50	169	1102	63.7
73941	56	19	11	2	28	59.5	92	78	75	251	1530	88.4
74692	75	17	17	5	19	57.5	94	91	93	268	1652	95.5
72160	63	9	10	3	23	44.5	59	78	85	259	1495	86.4
70993	57	9	11	10	25	54.5	77	74	87	257	1497	86.5
74442	69	11	15	3	22	50.5	82	81	91	271	1586	91.7
70961	63	5	5	4	13	27	82	71	82	240	1530	88.4
71927	54	7	12	6	17	41.5	83	76	88	220	1540	89.0
73609	70	17	16	4	12	49	96	88	97	250	1631	94.3
70209	73	3	10	8	13	33.5	61	74	73	189	1378	79.7
73930	66	11	17	8	22	57.5	81	84	96	268	1569	90.7
75513	63	8	12	6	29	54.5	82	89	89	227	1550	89.6

72292	47	5	12	9	22	48	78	84	80	249	1507	87.1
75740	66	9	15	7	27	58	74	79	80	245	1337	77.3
71301	78	19	15	6	28	68	97	93	94	278	1652	95.5
70349	81	9	13	3	19	43.5	72	56	64	209	1400	80.9
74178	57	6	14	7	26	52.5	82	93	95	277	1597	92.3
74924	67	9	12	1	26	48	89	93	99	292	1676	96.9
73683	62	17	11	11	24	62.5	88	81	84	233	1497	86.5
72197	69	17	14	5	33	68.5	92	88	77	252	1497	86.5
75721	70	11	16	4	37	68	95	93	100	300	1691	97.7
74020	57	7	10	8	19	44	72	65	68	187	1385	80.1
72883	71	14	13	10	28	65	91	87	87	262	1599	92.4
72259	57	5	4	5	8	22	75	72	60	229	1406	81.3
73436	59	8	14	5	22	48.5	83	80	86	273	1495	86.4
73153	56	6	10	9	10	35	86	76	85	213	1514	87.5
72811	51	5	11	11	32	59	86	89	91	292	1619	93.6
73088	75	16	17	6	34	73	98	98	99	300	1719	99.4
72404	60	9	11	9	27	56	85	89	94	286	1604	92.7
72040	73	3	1	5	7	16	86	68	70	210	1397	80.8
85116	63	13	14	5	32	64	96	98	99	292	1693	97.9
72722	60	9	10	5	32	55.5	81	78	78	280	1566	90.5
74578	56	6	8	7	21	41.5	82	86	99	280	1589	91.8
76392	72	15	8	16	31	70	92	72	81	285	1589	91.8
72637	57	7	6	6	13	32	69	66	65	195	1375	79.5
70576	63	9	9	5	12	34.5	54	50	62	208	1271	73.5
76292	48	6	11	3	14	34	81	82	91	277	1566	90.5
72316	61	9	11	5	14	38.5	82	65	75	249	1476	85.3
71627	62	12	15	4	23	53.5	95	91	97	266	1647	95.2
71539	56	5	10	11	19	45	72	78	87	238	1477	85.4
74757	60	3	10	1	15	29	68	64	82	219	1460	84.4
73342	78	18	13	16	31	77.5	96	96	99	295	1679	97.1
92142	51	5	11	5	21	41.5	63	81	73	199	1431	82.7
73637	44	8	8	14	21	50.5	87	93	91	256	1602	92.6
73602	60	2	8	2	10	21.5	72	86	78	256	1505	87.0
71789	25	6	12	4	26	47.5	74	91	93	276	1578	91.2
70402	57	6	8	12	16	41.5	61	82	84	243	1438	83.1
74834	57	11	14	7	23	54.5	90	96	96	271	1622	93.8
73900	55	14	12	11	27	63.5	89	91	99	277	1657	95.8
70642	57	7	11	4	21	42.5	82	93	97	274	1622	93.8
72684	65	11	12	8	20	51	94	89	82	280	1596	92.3
75616	77	5	6	5	12	27.5	64	68	69	198	1398	80.8
71385	52	6	14	5	26	51	87	85	94	276	1601	92.5
72369	67	13	12	7	24	56	87	74	86	249	1547	89.4
70884	76	18	16	6	30	69.5	88	88	86	253	1574	91.0
72069	63	5	9	3	13	30	75	76	90	241	1536	88.8

70119	63	8	12	8	22	50	90	84	95	273	1612	93.2
75461	57	4	7	6	12	28.5	73	72	80	257	1532	88.6
71032	87	19	16	9	36	79.5	99	99	100	300	1723	99.6
75875	43	3	6	7	14	30	61	72	80	247	1418	82.0
72249	56	11	15	9	19	54	77	67	80	202	1346	77.8
71552	59	15	14	12	23	64	83	58	76	243	1322	76.4
74674	57	5	11	4	25	44.5	72	92	99	282	1617	93.5
71161	56	4	6	3	18	30.5	68	60	62	204	1337	77.3
72721	72	9	14	12	22	56.5	76	73	68	263	1530	88.4
71616	53	11	16	12	29	67.5	88	90	98	293	1642	94.9
76035	57	17	7	9	10	42.5	91	64	75	152	1395	80.6
71187	65	10	15	8	27	60	85	85	73	290	1574	91.0
73676	52	10	13	1	22	45.5	87	74	87	275	1562	90.3
71564	65	20	12	6	29	66.5	88	78	91	265	1592	92.0
71489	53	13	11	5	32	60.5	78	78	87	277	1592	92.0
74612	65	11	13	11	26	61	96	78	95	274	1563	90.3
72839	62	11	12	4	21	48	82	69	90	211	1524	88.1
72606	75	16	13	5	25	58.5	93	88	70	284	1607	92.9
73418	66	15	15	7	30	66.5	91	96	96	297	1684	97.3
75709	60	6	13	2	29	49.5	71	79	76	244	1494	86.4
73724	78	9	12	13	17	50.5	77	80	83	270	1518	87.7
73440	87	19	19	6	38	82	97	100	100	300	1719	99.4
74656	66	18	13	5	16	52	82	61	66	165	1331	76.9
72678	63	18	16	10	23	66.5	89	70	86	235	1451	83.9
70873	57	4	9	6	12	31	61	75	75	203	1369	79.1
76377	65	7	10	5	29	51	89	89	98	290	1624	93.9
72862	58	16	14	3	33	66	95	99	100	295	1694	97.9
72132	57	16	11	10	28	64.5	90	86	84	246	1555	89.9
71987	59	13	13	8	21	54.5	84	90	82	257	1593	92.1
74888	57	9	11	8	16	43.5	72	70	87	258	1521	87.9
74523	56	10	14	14	30	67.5	86	84	94	290	1581	91.4
72308	61	8	10	13	25	56	86	81	89	251	1568	90.6
71876	57	12	9	6	21	48	77	56	64	231	1362	78.7
71420	61	9	12	3	22	46	77	79	77	221	1481	85.6
76216	56	7	12	6	17	41.5	81	77	91	257	1542	89.1
71255	57	6	8	6	17	36.5	73	82	75	232	1507	87.1
71054	63	17	13	13	27	69.5	86	87	92	274	1619	93.6
70691	43	17	10	9	9	45	87	73	78	201	1451	83.9
73901	66	7	8	6	9	29.5	73	54	71	205	1435	82.9
71295	57	2	6	3	7	18	88	76	77	179	1445	83.5
70228	76	13	15	4	33	64.5	95	94	92	296	1645	95.1
73195	60	9	12	8	9	38	82	73	78	204	1435	82.9
71341	72	7	12	3	27	49	72	78	86	251	1527	88.3
75089	75	9	10	7	23	48.5	84	72	98	262	1593	92.1

72771	58	3	9	5	15	32	88	83	92	254	1600	92.5
72477	49	3	10	6	14	33	81	88	88	258	1601	92.5
71977	72	5	9	6	18	37.5	56	59	51	158	1210	69.9
71061	58	4	11	6	22	43	57	73	71	212	1381	79.8
72347	59	7	13	6	19	45	84	79	96	294	1585	91.6
72547	78	10	13	4	21	47.5	68	89	85	232	1503	86.9
70676	70	18	12	4	27	61	83	88	90	260	1542	89.1
76271	62	10	12	9	29	60	92	89	96	270	1647	95.2
71946	56	7	9	8	15	38.5	89	64	83	228	1522	88.0
75836	57	5	12	4	24	44.5	72	90	88	250	1520	87.9
72500	68	8	10	5	28	50.5	66	59	60	253	1416	81.8
75418	60	5	10	4	21	40	56	54	66	196	1319	76.2
71218	55	7	7	2	9	24.5	66	52	63	191	1246	72.0
81813	51	19	7	9	11	45.5	92	56	60	198	1267	73.2
71183	57	5	8	13	12	37.5	67	76	80	222	1489	86.1
70825	66	7	13	3	25	48	69	68	89	235	1425	82.4
70601	53	14	18	13	25	69.5	92	95	95	287	1666	96.3
70416	85	17	15	15	33	79.5	88	85	87	293	1641	94.9
75171	54	8	8	10	23	48.5	77	80	66	242	1460	84.4
73264	56	13	8	5	15	40.5	66	51	52	204	1201	69.4
70943	68	8	12	2	33	55	74	95	94	287	1639	94.7
74474	58	7	11	7	28	52.5	83	94	99	281	1658	95.8
72802	57	14	16	7	25	61.5	93	95	98	283	1649	95.3
72136	84	17	19	17	39	92	95	96	89	291	1665	96.2
71545	52	18	14	7	29	67.5	99	92	100	279	1674	96.8
70552	31	7	9	2	12	30	74	60	64	219	1399	80.9
72636	59	7	9	5	19	40	58	61	61	232	1424	82.3
71815	67	19	8	8	14	48.5	75	50	58	190	1227	70.9
72080	43	7	7	8	16	37.5	71	52	61	190	1242	71.8
70796	73	13	18	7	34	71.5	75	94	93	281	1593	92.1
71062	50	9	12	4	22	46.5	83	83	69	268	1538	88.9
70240	49	14	8	7	26	55	75	58	70	256	1421	82.1
72383	75	18	13	5	35	71	98	95	98	278	1666	96.3
71648	59	8	9	7	25	48.5	69	84	73	267	1517	87.7
70818	65	12	12	6	18	48	80	68	70	247	1444	83.5
73335	61	15	12	7	24	58	92	85	92	277	1625	93.9
71911	57	5	11	10	18	43.5	87	76	79	261	1543	89.2
76491	66	4	15	3	24	46	76	78	82	245	1428	82.5
71367	63	4	13	2	25	43.5	59	78	80	282	1524	88.1
76527	66	10	17	2	36	65	89	91	94	292	1641	94.9
73282	59	17	12	4	29	61.5	95	79	89	280	1587	91.7
70945	69	17	12	2	29	60	97	88	92	265	1632	94.3
74629	66	15	13	3	28	58.5	95	88	99	290	1686	97.5
72734	66	7	10	1	8	25.5	79	79	77	225	1498	86.6

74422	68	6	10	4	31	51	65	83	82	281	1489	86.1
74379	57	10	12	13	14	49	89	85	87	242	1556	89.9
70693	63	8	11	10	31	59.5	90	95	98	296	1677	96.9
75874	62	6	11	8	18	42.5	73	55	58	241	1357	78.4
72014	69	13	13	5	20	50.5	89	81	86	250	1508	87.2
70456	61	18	13	3	30	64	89	81	87	259	1536	88.8
74511	61	17	11	9	18	54.5	95	64	74	230	1415	81.8
73399	82	19	11	5	30	65	96	93	90	276	1607	92.9
70776	69	8	11	2	30	51	93	98	100	290	1673	96.7
72058	55	11	12	6	28	56.5	88	92	94	291	1661	96.0
71615	52	8	12	8	28	55.5	86	98	97	283	1618	93.5
73552	62	7	6	5	15	33	59	61	53	166	1228	71.0
75066	57	6	10	4	25	44.5	62	85	81	282	1521	87.9
74464	66	8	10	5	23	45.5	78	61	87	244	1514	87.5
70758	64	6	14	5	34	58.5	76	95	95	270	1617	93.5
70455	51	19	13	10	20	61.5	93	81	91	262	1563	90.3
73887	53	4	12	11	25	51.5	63	67	90	247	1511	87.3
75517	68	13	10	10	17	49.5	94	92	95	264	1641	94.9
74456	58	6	8	5	11	29.5	83	77	75	254	1570	90.8
72674	55	12	12	11	24	58.5	93	91	95	277	1636	94.6
71256	63	8	14	5	26	52.5	71	82	81	254	1446	83.6
74393	58	19	16	4	33	71.5	94	88	95	289	1645	95.1
74046	54	8	10	5	20	42.5	80	72	90	282	1560	90.2
74558	50	5	9	5	16	34.5	79	91	95	264	1533	88.6
72894	57	11	13	6	24	54	92	93	94	264	1623	93.8
71651	81	11	17	17	37	81.5	69	88	90	267	1541	89.1
71565	59	8	7	6	13	33.5	58	50	61	207	1241	71.7
70333	54	12	10	4	20	45.5	85	85	97	254	1598	92.4
72237	72	8	11	5	26	50	80	72	74	250	1446	83.6
72103	63	17	13	11	28	68.5	95	92	96	279	1655	95.7
72208	56	5	11	9	25	49.5	85	93	91	267	1621	93.7
75585	74	12	11	3	27	52.5	75	89	84	246	1497	86.5
72345	70	11	18	12	29	70	77	79	80	251	1508	87.2
75720	59	6	11	3	16	36	72	74	72	219	1457	84.2
70468	53	19	12	5	32	67.5	97	84	96	289	1594	92.1
75166	60	3	10	5	13	31	67	61	77	187	1370	79.2
74450	63	16	10	3	17	45.5	87	83	87	251	1580	91.3
76613	59	5	11	7	12	34.5	69	53	52	172	1229	71.0
70069	48	9	8	10	20	47	92	94	91	282	1633	94.4
75448	58	6	7	7	8	27.5	87	92	80	247	1572	90.9
72499	49	6	11	3	29	48.5	79	83	100	255	1529	88.4
75143	56	5	12	9	23	48.5	70	84	91	267	1536	88.8
70999	59	10	6	5	16	36.5	85	91	94	248	1585	91.6
70146	62	3	10	6	18	37	56	54	59	218	1340	77.5

70369	79	15	18	3	35	71	97	98	98	297	1703	98.4
72528	73	10	14	6	25	55	82	81	87	282	1589	91.8
72046	50	3	5	2	20	29.5	65	69	80	271	1383	79.9
72810	51	8	9	8	22	47	89	90	95	216	1564	90.4
71360	65	10	13	4	28	55	81	91	90	283	1611	93.1
71406	72	10	13	6	28	56.5	58	60	65	223	1366	79.0
74953	49	3	9	5	15	32	89	66	91	251	1493	86.3
82031	46	5	12	2	8	26.5	69	65	80	213		82.0
72211	68	11	9	5	28	53	85	73	91	270	1569	90.7
74696	62	17	12	5	18	52	89	94	96	255	1607	92.9
70559	50	19	11	5	24	59	96	82	94	273	1605	92.8
72439	60	6	9	2	27	44	75	84	97	288	1635	94.5
73439	78	11	13	6	29	58.5	89	90	96	263	1647	95.2
72094	84	20	17	3	40	79.5	96	99	100	300	1698	98.2
71245	43	9	8	4	17	38	85	87	96	266	1562	90.3
74974	64	19	11	4	20	53.5	95	87	93	253	1596	92.3
74015	62	3	14	5	28	49.5	63	86	91	275	1554	89.8
76440	75	17	17	7	30	71	94	95	91	276	1600	92.5
70858	70	16	8	4	21	48.5	89	85	84	243	1569	90.7
74271	69	8	16	3	31	57.5	84	82	89	288	1550	89.6
72577	59	11	9	5	20	44.5	69	68	65	190	1304	75.4
76280	79	18	16	6	28	67.5	91	83	89	258	1528	88.3
70672	59	7	13	7	16	42.5	58	68	66	195	1347	77.9
46071	58	7	15	5	29	55.5	88	97	95	297	1653	95.5
80643	63	6	7	9	16	38	80	77	88	277	1565	90.5
72757	67	6	11	5	28	49.5	75	86	92	391	1619	93.6
76230	53	5	10	4	27	45.5	81	81	80	245	1546	89.4
72445	81			1	1	2	80	82	75			80.0
70663	57	5	12	1	11	29	64	59	63	172	1290	74.6
74548	70	15	13	4	13	45	92	79	75	254	1519	87.8
72268	65	9	9	14	26	58	76	84	89	265	1557	90.0
71950	57	6	8	8	19	40.5	74	73	79	233	1505	87.0
88382	40	8	5	3	15	31	69	73	91	228	1498	86.6
75131	53	15	16	6	27	64	88	84	82	267	1536	88.8
72025	54	6	8	8	21	43	76	90	84	269	1568	90.6
72265	66	12	10	4	15	40.5	70	76	86	220	1386	80.1
70171	75	9	14	7	23	53	74	60	69	176	1345	77.7
74603	70	5	17	17	26	64.5	75	78	80	249	1408	81.4
73842	65	6	8	6	27	46.5	83	88	95	293	1633	94.4
75466	62	7	11	4	15	36.5	85	86	78	271	1568	90.6
75370	53	12	9	6	13	39.5	90	80	89	245	1559	90.1
73539	71	13	6	5	19	43	78	73	74	206	1447	83.6
70400	63	7	9	6	18	39.5	66	57	60	241	1280	74.0
72318	57	18	12	6	28	64	94	92	96	279	1650	95.4

70317	59	6	11	4	15	35.5	62	71	66	200	1355	78.3
70773	60	9	6	7	16	38	62	57	54	201	1305	75.4
73451	66	8	9	3	20	40	72	83	94	266	1578	91.2
71592	69	14	13	14	16	56.5	87	87	99	225	1576	91.1
71597	61	12	9	2	17	39.5	71	81	92	251	1558	90.1
70926	75	12	11	6	21	49.5	96	93	88	283	1650	95.4
71498	66	8	11	11	18	47.5	82	80	80	266	1549	89.5
71466	78	9	14	11	25	58.5	78	83	75	263	1546	89.4
74239	64	9	12	4	14	38.5	83	84	93	269	1609	93.0
76481	51	13	10	7	19	48.5	91	90	95	249	1621	93.7
76540	61	9	14	12	30	64.5	88	89	100	274	1659	95.9
75718	55	5	6	5	10	26	55	83	72	211	1423	82.3
73429	64	8	8	9	22	46.5	61	75	72	251	1411	81.6
70593	69	8	8	7	31	54	80	71	83	246	1483	85.7
72502	52	6	13	5	28	52	75	86	95	290	1588	91.8
72194	57	6	6	2	21	34.5	80	84	78	232	1532	88.6
72218	77	11	9	13	21	53.5	86	84	97	243	1601	92.5
70218	77	12	8	7	25	51.5	95	83	94	274	1596	92.3
73428	68	14	10	13	26	62.5	93	85	91	232	1568	90.6
71411	66	5	11	5	15	35.5	90	62	69	253	1446	83.6
72005	56	7	11	6	19	42.5	79	85	94	225	1535	88.7
71495	77	15	13	6	27	61	94	84	86	253	1573	90.9
71149	60	4	9	4	23	40	64	85	94	261	1538	88.9
72671	78	6	17	17	27	66.5	75	88	94	272	1550	89.6
71009	57	10	13	8	23	53.5	84	77	67	222	1362	78.7
70248	66	10	12	7	29	58	85	87	74	266	1537	88.8
73764	63	6	14	6	20	46	59	79	92	205	1467	84.8
73645	53	5	8	3	18	34	72	76	82	232	1430	82.7
70052	75	17	15	5	31	68	92	87	97	280	1649	95.3
73084	64	10	12	7	24	53	83	88	90	282	1557	90.0
71821	65	12	8	8	26	54	91	90	89	276	1619	93.6
71719	62	5	6	3	19	33	59	71	67	238	1418	82.0
71543	54	8	8	8	16	39.5	86	85	84	217	1519	87.8
70229	76	18	15	7	37	76.5	94	98	87	285	1626	94.0
71486	63	8	12	4	29	53	85	84	89	267	1605	92.8
74942	66	9	10	3	32	53.5	90	95	97	282	1669	96.5
73610	57	10	16	4	16	45.5	81	85	87	262	1546	89.4
71749	66	7	15	16	38	76	92	93	99	297	1661	96.0
70471	69	16	12	12	26	65.5	90	82	96	272	1630	94.2
45229	40	5	8	5	9	27	70	81	93	276	1561	90.2
72195	84	20	14	4	27	64.5	91	67	74	225	1483	85.7
73925	79	11	10	4	16	40.5	86	66	70	243	1527	88.3
74941	69	9	14	12	20	54.5	78	63	82	231	1453	84.0
74866	63	6	10	6	18	40	78	91	97	275	1633	94.4

70503	57	6	11	3	13	32.5	88	61	74	202	1461	84.5
70191	60	7	10	3	18	37.5	76	81	91	251	1575	91.0
71031	55	11	14	2	29	56	82	87	89	257	1552	89.7
76044	83	16	13	6	31	65.5	83	80	81	245	1435	82.9
70281	61	4	9	4	14	31	73	51	53	217	1330	76.9
73126	56	12	12	12	27	63	95	95	97	261	1653	95.5
70356	57	15	11	6	21	52.5	85	86	87	271	1593	92.1
71730	60	6	7	3	29	44.5	86	83	97	289	1629	94.2
76310	69	15	12	13	25	64.5	85	78	81	251	1555	89.9
76075	61	10	14	10	32	65.5	88	84	92	280	1607	92.9
72504	81	14	12	4	32	61.5	90	91	100	288	1668	96.4
74826	57	4	12	5	22	43	61	52	66	207	1341	77.5
71447	57	6	8	4	22	40	79	69	83	240	1500	86.7
70323	57	9	10	12	21	52	87	80	78	249	1493	86.3
73364	63	6	9	5	12	32	71	58	60	206	1413	81.7
74770	62	12	12	6	19	49	81	86	82	286	1599	92.4
70821	69	14	17	6	32	68.5	96	95	99	294	1696	98.0
72493	81	17	13	2	34	65.5	87	91	90	296	1669	96.5
75299	57	5	7	4	12	27.5	63	63	76	220	1370	79.2
75443	61	9	7	11	24	51	70	78	78	259	1532	88.6
73260	75	19	15	3	16	52.5	93	65	75	218	1474	85.2
72779	79	18	16	11	35	80	94	97	94	273	1659	95.9
75521	55	4	12	1	14	30.5	69	52	57	187	1349	78.0
73749	66	6	9	5	25	44.5	81	77	94	282	1614	93.3
70178	65	5	13	15	29	62	67	72	81	260	1463	84.6
76206	70	19	13	3	28	63	98	86	98	296	1683	97.3
75510	63	5	7	5	11	27.5	77	81	87	247	1546	89.4
73235	61	5	13	4	22	44	70	86	95	266	1551	89.7
72351	67	14	10	6	28	58	93	94	96	291	1674	96.8
76556	63	7	11	10	23	51	87	86	84	279	1625	93.9
75041	81	15	14	8	33	69.5	91	93	94	267	1611	93.1
74229	60	14	15	8	30	67	99	98	99	300	1709	98.8
73405	73	18	14	6	30	67.5	97	92	99	300	1678	97.0
74677	56	3	10	6	14	33	62	69	79	214	1390	80.3
71443	74	11	13	3	25	52	80	89	91	269	1594	92.1
70043	63	8	12	5	14	38.5	87	75	65	229	1516	87.6
74583	61	11	10	5	13	39	74	62	60	199	1396	80.7
73401	70	5	10	6	17	38	69	71	67	208	1450	83.8
75654	63	4	11	9	16	39.5	61	59	65	193	1276	73.8
75393	58	15	8	6	27	55.5	91	91	80	262	1594	92.1
70647	71	13	15	16	32	76	95	96	97	286	1683	97.3
75165	57	8	9	6	17	39.5	80	75	65	246	1473	85.1
72283	86	16	18	6	34	74	86	97	100	281	1631	94.3
70526	76	16	18	6	36	75.5	94	97	96	290	1656	95.7

75415	69	15	10	12	27	63.5	92	85	96	267	1621	93.7
71156	54	17	12	6	29	64	85	79	87	249	1502	86.8
71647	72	15	11	9	19	54	85	82	85	166	1463	84.6
75060	57	7	10	8	23	47.5	87	59	82	241	1435	82.9
72171	44	11	9	2	19	41	90	76	85	252	1492	86.2
75335	59	6	11	7	32	55.5	78	80	85	241	1524	88.1
70605	55	16	10	6	15	46.5	82	69	70	210	1489	86.1
76144	45	9	8	5	11	32.5	80	71	89	242	1552	89.7
76232	64	7	12	4	15	37.5	61	76	87	219	1457	84.2
72693	81	19	13	4	26	62	90	88	92	226	1545	89.3
75184	62	8	13	12	21	54	90	75	93	261	1607	92.9
73162	44	6	14	6	19	45	80	83	90	265	1562	90.3
70801	57	8	9	12	21	50	78	82	77	266	1533	88.6
73198	69	18	14	6	35	72.5	95	98	95	290	1671	96.6
70615	72	17	16	8	35	75.5	86	91	96	291	1628	94.1
74742	66	9	13	2	34	58	92	93	99	276	1637	94.6
72366	66	13	14	11	26	63.5	94	84	79	258	1533	88.6
72519	49	9	19	5	32	65	87	87	90	270	1615	93.4
72128	63	8	10	8	13	39	73	77	71	241	1439	83.2
74951	76	19	17	17	25	78	96	95	94	292	1663	96.1
74607	78	12	16	5	28	60.5	98	98	99	295	1713	99.0
46711	56	7	15	12	24	58	68	84	80	257	1514	87.5
72581	69	6	8	11	16	40.5	68	77	81	213	1455	84.1
72291	64	10	9	5	21	45	78	73	69	249	1485	85.8
72864	55	7	11	6	18	41.5	72	69	77	235	1486	85.9
76253	67	12	13	5	29	58.5	85	92	93	276	1605	92.8
73031	58	11	7	10	14	42	85	66	80	220	1449	83.8
74718	56	5	12	7	29	53	69	78	79	285	1521	87.9
73346	66	10	14	4	17	44.5	76	77	83	236	1546	89.4
71497	72	17	12	6	25	59.5	96	87	91	287	1659	95.9
73302	64	18	9	11	15	53	87	57	58	208	1330	76.9
72759	62	5	17	7	25	54	83	94	96	281	1648	95.3
72742	56	9	8	5	12	34	93	86	86	225	1513	87.5
73811	71	9	15	4	31	59	83	92	96	293	1665	96.2
73542	57	7	9	5	18	39	80	90	97	274	1555	89.9
70342	67	12	15	5	20	52	91	93	90	283	1625	93.9
71590	45	5	7	6	27	44.5	75	85	87	270	1586	91.7
75626	72	7	11	6	31	55	87	82	87	257	1594	92.1
74721	66	11	14	6	21	52	88	73	84	231	1488	86.0
71572	59	16	9	4	29	57.5	93	86	93	238	1569	90.7
70477	70	20	12	4	30	65.5	96	87	49	266	1623	93.8
70242	57	6	10	5	15	36	69	60	72	208	1357	78.4
72659	68	13	11	3	19	45.5	87	74	92	255	1543	89.2
72673	72	19	12	6	30	67	94	86	87	284	1574	91.0

71645	67	11	4	2	10	27	87	73	79	201	1422	82.2
72474	77	5	10	5	19	39	78	88	86	264	1576	91.1
72406	46	11	6	2	17	35.5	72	58	72	202	1300	75.1
73774	59	6	11	7	17	40.5	84	76	71	194	1424	82.3
75325	56	10	10	9	22	50.5	70	60	52	252	1347	77.9
73044	66	4	11	10	25	50	72	87	91	281	1608	92.9
75912	53	4	9	1	17	30.5	78	69	89	248	1459	84.3
70722	71	15	14	5	26	59.5	95	91	95	290	1659	95.9
92562	73	4	12	6	12	33.5	73	63	72	203	1363	78.8
71537	57	6	11	6	21	44	84	88	98	272	1623	93.8
75138	57	4	11	8	22	44.5	60	60	87	253	1437	83.1
72117	64	13	9	7	23	52	90	86	96	259	1619	93.6
74462	55	8	11	2	14	34.5	81	73	79	197	1370	79.2
76104	59	10	8	8	16	41.5	91	50	75	203	1380	79.8
72324	81	19	17	7	33	76	96	95	98	293	1666	96.3
70201	89	14	18	4	28	63.5	72	81	84	252	1511	87.3
70121	64	5	7	2	20	33.5	62	59	69	235	1350	78.0
76024	58	4	12	7	22	45	73	56	78	236	1434	82.9
75690	45	6	9	2	8	25	61	62	73	180	1325	76.6
72710	57	5	11	5	15	36	79	90	97	268	1622	93.8
72315	55	11	13	8	24	56	88	67	77	234	1494	86.4
75689	57	7	11	10	20	48	50	68	74	243	1453	84.0
74896	76	15	12	6	27	59.5	88	85	89	261	1547	89.4
72138	61	6	12	3	33	54	77	77	89	257	1499	86.6
70334	62	10	12	10	24	55.5	88	93	100	282	1670	96.5
70770	55	6	12	4	16	38						81.3
76277	67	7	10	3	27	47	67	74	77	237	1424	82.3
73299	56	7	6	7	19	38.5	75	61	64	257	1396	80.7
71662	59	6	12	7	11	35.5	83	79	80	234	1530	88.4
70259	51	4	9	8	21	42	64	85	88	230	1469	84.9
71736	59	8	8	4	20	39.5	82	73	81	238	1465	84.7
75627	66	4	8	6	15	32.5	50	50	50	173	1224	70.8
73692	57	5	11	2	16	34	64	72	79	220	1461	84.5
76551	59	6	10	6	13	35	82	76	79	257	1547	89.4
71258	57	17	16	8	31	72	98	96	100	291	1652	95.5
72882	57	10	12	12	29	63	92	92	96	296	1675	96.8
75650	73	16	16	6	29	67	89	77	92	275	1586	91.7
75241	60	7	7	5	9	28	88	86	89	257	1599	92.4
73505	51	18	12	8	19	57	89	80	86	250	1506	87.1
47904	56	10	13	11	22	55.5	87	87	86	274	1585	91.6
74457	67	7	10	5	25	46.5	87	87	97	287	1625	93.9
73642	69	17	11	4	17	48.5	89	76	86	260	1562	90.3
75040	53	15	15	6	31	67	95	92	94	272	1636	94.6
71566	45	7	6	4	13	29.5	56	56	59	224	1298	75.0

73177	54	11	15	5	24	54.5	80	75	93	258	1562	90.3
73371	66	16	15	8	25	64	92	90	95	278	1605	92.8
70260	60	8	10	6	20	44	71	61	70	248	1419	82.0
72164	49	8	7	3	11	28.5	58	50	60	176	1299	75.1
71705	78	17	15	4	33	69	96	96	91	295	1647	95.2
75469	57	8	10	8	20	45.5	81	60	77	222	1469	84.9
72045	61	6	10	8	23	46.5	75	66	75	284	1548	89.5
74751	68	11	11	2	29	52.5	86	70	82	249	1506	87.1
70160	78	6	13	5	19	43	72	58	65	192	1305	75.4
72365	55	6	9	7	19	40.5	63	72	86	222	1397	80.8
70158	70	17	12	5	22	56	93	69	76	231	1485	85.8
75614	63	10	9	3	16	37.5	77	65	64	197	1365	78.9
71922	61	3	7	5	13	28	59	51	56	203	1283	74.2
47578	38	6	7	4	11	27.5	98	93	88	282	1662	96.1
74775	68	6	13	5	11	34.5	63	59	66	182	1337	77.3
72378	57	6	14	10	29	58.5	72	66	89	252	1412	81.6
74494	69	12	15	5	37	68.5	89	93	98	297	1663	96.1
70539	69	17	16	6	32	70.5	87	88	95	273	1593	92.1
72076	46	6	5	3	15	28.5	67	71	73	271	1473	85.1
72843	60	10	11	10	20	50.5	91	93	97	278	1651	95.4
72513	56	8	7	5	11	30.5	78	86	82	207	1491	86.2
71490	65	14	11	8	24	56.5	94	94	91	265	1636	94.6
74299	57	7	5	10	12	34	66	53	51	160	1243	71.8
74469	58	4	7	9	7	27	65	57	58	187	1279	73.9
73227	55	3	9	3	21	36	72	78	72	208	1482	85.7
70382	63	8	13	3	30	54	83	88	90	293	1545	89.3
70124	60	7	9	7	18	41	91	94	94	294	1660	96.0
73320	57	11	12	7	19	49	64	69	54	210	1397	80.8
72030	57	8	7	6	14	35	83	78	78	247	1515	87.6
70341	61	8	13	4	30	54.5	76	66	71	268	1487	86.0
72664	66	19	15	14	38	86	95	92	95	294	1594	92.1
76083	79	19	13	9	21	61.5	93	89	95	271	1624	93.9
72644	59	8	10	4	20	41.5	72	75	77	225	1448	83.7
70923	66	18	4	4	21	46.5	86	61	60	212	1376	79.5
70837	58	5	7	3	13	27.5	82	72	85	204	1488	86.0
70433	50	4	7	3	23	36.5	80	66	58	270	1465	84.7
72711	44	7	13	6	25	50.5	94	98	99	255	1630	94.2
71504	63	14	12	8	20	53.5	84	71	65	240	1409	81.4
70438	60	11	11	9	28	59	84	90	96	269	1619	93.6
72407	60	7	9	5	14	34.5	85	90	81	212	1532	88.6
72015	69	13	14	7	31	65	92	93	95	289	1660	96.0
73808	63	6	9	6	32	52.5	68	66	71	266	1499	86.6
72903	63	6	9	3	21	39	83	88	96	269	1604	92.7
71050	57	10	10	4	15	38.5	85	91	95	271	1552	89.7

71772	60	8	14	9	30	60.5	77	87	100	290	1661	96.0
71100	58	4	7	8	16	34.5	56	51	61	189	1299	75.1
70703	60	6	7	5	26	43.5	83	81	92	270	1591	92.0
75688	57	9	14	4	24	50.5	69	75	69	211	1413	81.7
70151	55	8	10	10	20	48	87	86	92	255	1574	91.0
75282	51	5	5	7	24	40.5	84	85	93	247	1603	92.7
75860	78	15	14	19	33	80.5	99	97	100	300	1669	96.5
74502	77	15	15	8	37	75	97	98	100	297	1702	98.4
73096	58	9	11	5	25	50	86	92	90	283	1600	92.5
71912	57	17	8	5	15	45	87	83	90	242	1478	85.4
73000	60	7	12	5	20	43.5	89	78	91	219	1476	85.3
76040	73	17	5	3	11	35.5	94	89	78	270	1493	86.3
72199	40	16	15	7	20	58	84	60	71	229	1278	73.9
73197	63	13	9	6	16	43.5	78	54	62	168	1305	75.4
73746	72	11	19	6	37	73	83	90	94	293	1627	94.0
72592	49	7	8	3	13	30.5	81	80	78	256	1533	88.6
74257	58	13	12	3	27	55	78	78	91	264	1524	88.1
71129	46	5	13	7	20	45	78	87	81	251	1556	89.9
70359	65	6	14	5	22	47	83	93	93	295	1626	94.0
72618	69	12	14	10	36	72	93	84	94	282	1608	92.9
70692	75	16	15	7	19	57	93	93	95	285	1679	97.1
71908	57	4	11	11	27	53	74	76	92	271	1573	90.9
74636	57	6	10	4	22	42	85	82	86	224	1511	87.3
72590	73	20	12	9	28	68.5	94	84	74	268	1566	90.5
74289	66	5	12	7	30	53.5	78	93	97	292	1604	92.7
72201	72	19	19	6	37	80.5	100	98	99	300	1718	99.3
71863	82	18	19	6	37	80	96	96	98	296	1686	97.5
72753	61	15	13	3	13	44	90	57	70	165	1397	80.8
70176	62	11	13	4	31	58.5	79	97	89	266	1606	92.8
75217	70	7	12	8	23	49.5	59	5	52	222	1338	77.3
73924	40	4	3	2	9	18	77	55	69	204	1346	77.8
73904	66	6	8	6	11	31	53	69	60	239	1445	83.5
72573	61	6	9	6	17	38	78	67	65	233	1399	80.9
73933	61	9	11	6	19	44.5	76	73	78	211	1463	84.6
73738	58	9	15	11	30	65	73	80	93	248	1529	88.4
74959	60	6	7	9	16	37.5	86	78	77	238	1485	85.8
73547	57	15	9	5	14	43	81	55	59	166	1217	70.3
75358	80	7	16	5	31	59	70	90	96	278	1617	93.5
72473	60	6	13	4	29	52	77	79	92	287	1621	93.7
71918	54	9	6	8	19	42	78	79	92	244	1556	89.9
72090	66	14	16	9	31	70	91	97	98	288	1669	96.5
71263	64	14	12	14	27	67	95	77	78	224	1522	88.0
74545	66	20	12	6	31	68.5	89	79	86	241	1470	85.0
72209	55	19	13	3	19	54	93	98	91	284	1634	94.5

74614	49	11	16	3	34	64	74	82	87	290	1551	89.7
71452	43	9	7	9	15	40	82	87	81	271	1583	91.5
71468	53	12	13	10	23	58	89	65	84	233	1546	89.4
72915	68	6	14	3	16	38.5	52	53	58	208	1295	74.9
74771	66	5	9	6	12	32	66	79	80	199	1483	85.7
72398	74	12	13	12	25	61.5	82	81	85	258	1546	89.4
73390	78	17	20	14	38	89	93	97	98	299	1697	98.1
75920	55	2	7	4	21	33.5	66	62	69	210	1384	80.0
71395	70	5	13	3	27	48	71	87	90	276	1482	85.7
74017	63	17	13	7	14	50.5	93	75	79	243	1494	86.4
72362	57	8	9	6	22	44.5	67	76	84	251	1462	84.5
70129	53	7	7	9	16	39	74	67	86	218	1421	82.1
76559	66	9	16	3	27	54.5	87	94	99	275	1671	96.6
70279	63	12	10	13	29	64	92	88	90	278	1618	93.5
71325	66	10	12	5	27	54	77	64	64	228	1359	78.6
76526	61	8	13	4	32	57	81	60	76	263	1410	81.5
71663	63	5	10	5	12	31.5	72	75	79	194	1454	84.0
71235	77	8	14	5	34	61	88	92	99	291	1632	94.3
73387	45	7	9	4	11	31	71	59	63	169	1326	76.6
73763	64	6	6	2	12	25.5	72	70	63	184	1352	78.2
73990	62	16	15	13	26	69.5	92	83	84	232	1546	89.4
70340	61	4	11	1	24	39.5	85	92	95	255	1615	93.4
76054	58	5	7	3	12	27	55	56	65	163	1312	75.8
76238	55	9	10	5	21	44.5	85	50	76	192	1362	78.7
72705	72	20	15	4	31	69.5	95	91	92	282	1639	94.7
73553	65	17	14	4	30	65	86	81	81	265	1546	89.4
70457	69	19	11	4	30	64	91	80	89	287	1582	91.4
72176	56	9	9	6	15	39	82	78	76	194	1315	76.0
71729	56	6	9	5	17	37	91	88	94	266	1623	93.8
70198	76	20	11	6	31	67.5	95	82	81	277	1565	90.5
70906	60	1	9	4	18	32	71	79	79	218	1441	83.3
70497	66	7	13	11	21	52	72	57	77	193	1356	78.4
73099	51	10	9	3	15	37	84	78	75	215	1483	85.7
75845	59	7	9	10	17	43	77	84	94	193	1589	82.3
75243	63	15	12	17	35	78.5	88	82	92	293	1617	93.5
70208	57	15	5	5	14	38.5	74	78	65	193	1315	76.0
74940	78	18	13	8	24	63	98	95	98	290	1684	97.3
72612	78	19	15	17	32	82.5	91	90	95	289	1628	94.1
73057	57	7	10	7	22	45.5	86	76	85	244	1556	89.9
70699	68	14	18	16	33	81	92	94	98	288	1628	94.1
71237	56	14	15	6	21	55.5	85	80	95	257	1569	90.7
70241	60	15	9	4	10	37.5	71	55	55	150	1210	69.9
70114	55	12	11	6	14	43	97	93	97	292	1668	96.4
74281	72	15	13	17	32	77	95	96	98	294	1694	97.9

72569	41	10	7	9	18	44	89	90	90	267	1572	90.9
73581	59	10	10	6	11	37	87	64	85	229	1408	81.4
72387	68	11	13	5	17	46	82	85	75	220	1452	83.9
72178	62	15	10	3	10	37.5	92	73	85	205	1489	86.1
72627	55	16	9	9	19	52.5	67	80	60	262	1378	79.7
70528	75	16	17	6	24	62.5	89	67	89	244	1463	84.6
75579	58	3	4	3	17	27	56	73	69	262	1437	83.1
73006	55	10	9	3	21	42.5	70	73	68	246	1426	82.4
72189	64	12	9	6	26	53	91	84	92	273	1602	92.6
75397	72	9	10	3	14	35.5	81	87	90	255	1569	90.7
74283	62	14	14	6	30	63.5	92	94	96	286	1655	95.7
75502	56	8	8	8	15	39	77	69	78	234	1497	86.5
48080	58	6	11	9	20	46	78	85	86	246	1548	89.5
76482	65	6	8	5	14	32.5	79	70	80	205	1417	81.9
75471	87	19	18	5	32	74	91	87	93	280	1637	94.6
72686	65	10	11	8	27	56	87	78	83	272	1555	89.9
70305	58	18	11	4	11	43.5	90	64	80	237	1464	84.6
73203	60	9	14	3	21	47	82	85	89	258	1551	89.7
70602	60	17	14	6	34	71	97	99	98	295	1708	98.7
73902	55	7	10	9	26	51.5	76	69	84	257	1535	88.7
70155	81	19	16	12	31	77.5	95	86	84	286	1561	90.2
75899	86	19	18	7	36	80	100	94	98	299	1690	97.7
71158	60	12	6	6	10	34	82	88	80	245	1505	87.0
74690	54	18	7	5	24	53.5	84	83	87	265	1462	84.5
74439	55	5	9	12	25	51	81	67	78	266	1469	84.9
71114	42	14	10	5	29	57.5	91	89	95	278	1647	95.2
71840	57	6	14	3	16	38.5	92	94	90	268	1631	94.3
73378	54	11	10	7	23	50.5	86	81	96	270	1606	92.8
73629	58	2	7	5	17	31	68	84	82	236	1521	87.9
76250	61	3	10	5	15	32.5	68	68	79	177	1403	81.1
74638	62	6	10	7	22	44.5	85	88	82	225	1538	88.9
70246	66	10	15	6	27	57.5	83	79	88	282	1562	90.3
75008	45	6	10	4	18	37.5	80	83	86	261	1531	88.5
71146	57	14	14	6	26	59.5	89	93	83	239	1517	87.7
70883	60	11	8	4	23	46	84	66	78	248	1437	74.5
70458	54	7	10	4	22	42.5	82	73	74	250	1506	87.1
70264	73	10	9	12	16	46.5	60	82	78	256	1479	85.5
76095	71	7	14	4	35	60	67	92	93	294	1616	93.4
73844	71	10	12	8	30	59.5	90	84	94	267	1616	93.4
76201	57	15	15	4	27	60.5	87	78	91	262	1606	92.8
73755	49	5	10	3	22	40	78	84	87	248	1548	89.5
70444	58	8	6	8	15	36.5	67	69	75	208	1379	79.7
70294	62	8	11	6	15	40	65	70	80	221	1416	81.8
74700	55	16	11	4	28	59	94	90	100	251	1632	94.3

73684	69	16	16	5	27	63.5	83	93	95	259	1567	90.6
70253	61	8	10	3	24	44.5	72	81	88	250	1511	87.3
73312	57	9	9	15	29	61.5	84	64	89	239	1488	86.0
74554	60	6	9	2	19	36	90	84	90	268	1609	93.0
75539	63	7	10	12	24	53	76	79	85	233	1491	86.2
71305	60	4	10	4	19	37	75	76	64	173	1365	78.9
72774	57	9	10	12	15	45.5	75	71	73	223	1484	85.8
71309	73	13	11	14	31	69	89	86	88	290	1626	94.0
76411	55	13	11	6	21	51	86	65	62	150	1359	78.6
76105	59	3	4	5	14	26	70	79	86	248	1516	78.5
73948	55	9	7	6	23	44.5	79	80	72	281	1552	89.7
72169	56	12	9	9	21	50.5	82	70	81	240	1485	85.8
87104	70	9	13	12	19	53	79	93	92	281	1637	94.6
70154	58	19	9	2	14	44	96	73	74	250	1457	84.2
76511	73	5	9	4	24	41.5	57	53	63	258	1342	77.6
74023	50	16	12	7	30	64.5	94	96	94	279	1606	92.8
72485	61	10	12	9	28	58.5	75	79	96	252	1538	88.9
75699	72	11	10	5	18	43.5	79	59	54	241	1379	79.7
74532	60	19	18	8	29	73.5	94	77	80	243	1525	88.2
74506	59	10	12	12	21	55	84	77	79	223	1507	87.1
72638	59	6	11	4	20	40.5	69	73	77	217	1430	82.7
72650	59	7	8	6	25	46	92	93	97	289	1651	95.4
70271	84	12	17	5	33	67	81	100	99	299	1692	97.8
72911	46	5	7	4	15	30.5	72	73	79	221	1472	85.1
73360	66	12	10	4	19	45	82	66	63	196	1355	78.3
72032	54	16	16	12	27	70.5	86	97	94	287	1636	94.6
70984	60	13	11	8	16	47.5	88	72	75	212	1415	81.8
72130	61	4	9	5	13	31	53	75	61	195	1366	79.0
75012	68	17	13	11	21	61.5	93	58	86	240	1510	87.3
72414	78	19	17	5	22	63	95	78	82	265	1576	91.1
76016	53	6	10	3	28	47	76	77	94	270	1566	90.5
71419	50	7	8	8	27	50	86	81	88	260	1548	89.5
71804	60	12	12	8	17	49	92	83	95	272	1624	93.9
73425	70	17	17	4	33	70.5	98	99	100	295	1707	98.7
70933	68	9	10	7	28	53.5	88	95	99	296	1691	97.7
76013	58	7	11	4	17	38.5	83	61	83	242	1495	86.4
73223	78	8	11	6	26	51	86	73	73	241	1536	88.8
70431	68	10	13	6	17	46	81	62	72	206	1422	82.2
74192	63	14	13	4	22	52.5	90	95	94	288	1647	95.2
73094	61	7	13	6	29	55	96	91	100	290	1673	96.7
72157	60	13	11	11	18	53	88	88	93	253	1588	91.8
74878	58	9	12	5	12	37.5	79	74	81	220	1449	83.8
73058	69	10	14	5	28	56.5	84	96	97	294	1649	95.3
71948	57	5	12	6	18	41	55	55	76	210	1369	79.1

73489	66	7	10	8	18	42.5	77	82	90	252	1513	87.5
48157	57	13	12	6	17	47.5	87	83	94	266	1603	92.7
72375	57	7	10	8	28	52.5	76	86	84	269	1500	86.7
70504	56	4	9	1	11	25	66	60	59	200	1306	75.5
85914	85	16	14	5	38	73	95	92	97	297	1652	95.5
76598	62	8	10	5	22	45	74	69	65	208	1371	79.2
72451	88	16	16	6	36	73.5	84	91	97	279	1656	95.7
70443	71	7	13	5	18	42.5	67	67	80	208	1376	79.5
75381	62	16	13	8	27	64	94	79	93	258	1595	92.2
72363	66	9	14	5	20	47.5	84	87	89	286	1609	93.0
73147	60	13	13	6	30	61.5	84	89	88	266	1584	91.6
76599	60	6	5	2	16	29	63	61	78	201	1293	74.7
71546	62	6	10	4	16	36	63	56	62	168	1356	78.4
76120	63	16	13	4	25	57.5	86	84	79	284	1542	89.1
72756	68	18	10	5	11	43.5	94	88	94	283	1626	94.0
70844	63	9	14	5	28	55.5	89	96	99	281	1661	96.0
73560	62	16	13	5	19	53	83	61	57	227	1332	77.0
72134	63	6	10	10	19	44.5	76	62	58	256	1420	82.1
74599	75	8	15	4	18	44.5	80	72	91	208	1513	87.5
73052	53	6	9	4	14	32.5	72	65	76	233	1351	78.1
71806	76	13	13	7	29	62	87	90	95	283	1611	93.1
76309	72	19	11	9	20	58.5	92	75	89	235	1490	86.1
70100	54	9	14	3	27	53	73	97	88	283	1609	93.0
72597	56	10	9	8	20	46.5	78	61	84	253	1474	85.2
74519	75	8	8	7	12	34.5	82	85	81	218	1639	84.9
71065	74	13	16	9	24	62	92	86	85	280	1615	93.4
73385	75	14	19	20	36	88.5	87	87	94	273	1531	88.5
75551	55	10	5	7	9	31	72	55	58	150	1267	73.2
70403	60	9	8	5	16	37.5	76	89	71	278	1521	87.9
73066	66	14	20	5	33	71.5	90	93	98	287	1639	94.7
74135	88	18	15	11	26	69.5	92	73	86	270	1517	87.7

73575	57	8	7	3	20	38	69	66	88	216	1480	85.5
72116	63	12	10	10	22	53.5	87	73	86	226	1494	86.4
72550	80	15	15	5	36	71	92	96	97	288	1667	96.4
75062	58	8	8	2	27	44.5	79	67	85	273	1540	89.0
73883	63	5	14	6	21	46	61	55	58	211	1270	73.4
72656	57	8	12	6	20	45.5	78	90	99	285	1607	92.9
76359	55	5	14	5	11	35	65	68	69	237	1420	82.1
74285	76	7	11	8	11	37	61	61	74	196	1307	75.5
72765	60	4	11	6	21	41.5	66	81	87	260	1500	86.7
74591	74	13	12	14	34	72.5	89	91	90	287	1661	96.0
74543	62	4	9	5	15	32.5	71	72	80	225	1463	84.6
71326	56	13	11	7	14	44.5	77	57	57	156	1252	72.4
70272	68	8	13	5	20	46	73	57	65	242	1436	83.0
70664	51	6	11	6	21	43.5	79	94	99	288	1647	95.2
70391	74	12	14	4	25	55	81	88	94	291	1632	94.3
75422	73	6	11	4	24	45	58	70	60	200	1248	72.1
76218	49	4	6	2	17	28.5	88	80	92	269	1546	89.4
74275	58	9	11	3	19	41.5	78	64	78	207	1443	83.4
74889	61	17	16	15	38	86	95	96	100	291	1672	96.6
76301	55	7	12	9	18	45.5	72	75	85	250	1442	83.4
74429	64	10	13	5	21	49	75	88	78	241	1526	88.2
75159	56	7	6	5	12	30	77	63	56	227	1400	80.9
73898	60	7	8	5	15	34.5	57	54	77	174	1413	73.2
72775	56	7	9	8	15	39	84	69	62	206	1262	72.9
72269	57	7	5	4	14	30	72	70	70	194	1234	71.3
71463	79	14	10	7	21	51.5	89	87	95	244	1619	93.6
70405	73	15	9	4	21	48.5	85	73	74	279	1526	88.2
72782	57	5	6	6	14	30.5	51	55	51	172	1167	67.5
71096	82	19	18	4	31	71.5	91	88	86	295	1605	92.8
70302	80	18	18	4	31	71	97	95	97	286	1662	96.1
72515	60	9	12	5	21	46.5	63	69	60	188	1328	76.8
73713	66	11	15	12	34	72	95	92	98	293	1692	97.8
70090	61	5	8	5	14	31.5	89	90	94	277	1628	94.1
74224	61	13	9	4	20	45.5	84	75	62	204	1402	81.0
76327	58	9	11	8	22	50	80	84	98	281	1604	92.7
75216	54	5	6	7	14	32	71	60	71	256	1454	84.0
72816	66	15	14	3	21	52.5	87	88	89	260	1519	87.8
73157	75	7	11	4	17	39	82	85	74	228	1532	88.6
72483	48	5	10	7	18	40	60	79	80	213	1447	83.6
74258	66	15	11	6	20	51.5	86	84	92	259	1584	91.6
72646	81	16	11	8	36	70.5	94	97	95	287	1668	96.4
73135	70	17	16	7	37	76.5	97	95	100	300	1712	99.0
76081	58	8	6	5	18	37	51	67	76	192	1360	78.6
71041	63	18	14	6	29	67	91	95	97	281	1629	94.2

74637	82	18	16	7	36	76.5	100	100	98	277	1681	97.2
75457	56	12	7	6	27	51.5	82	82	88	255	1592	92.0
74215	69	20	15	10	24	68.5	82	77	78	267	1519	87.8
73695	56	13	11	12	19	55	93	81	80	240	1513	87.5
72622	72	7	4	10	19	39.5	93	90	93	285	1597	92.3
73060	56	6	14	2	17	38.5	72	82	91	251	1469	84.9
49408	62	6	10	3	22	41	84	87	96	291	1650	95.4
71021	60	15	10	3	20	47.5	90	74	81	220	1466	84.7
71370	63	10	15	11	31	66.5	84	85	88	281	1588	91.8
74479	52	8	8	6	30	51.5	75	77	81	261	1490	86.1
74099	64	7	12	5	11	35	74	60	58	192	1338	77.3
71591	73	11	15	2	29	57	87	93	92	237	1568	90.6
72580	63	6	9	3	15	33	71	84	74	236	1467	84.8
74080	68	15	10	3	14	42	86	62	68	159	1359	78.6
73788	51	6	14	5	28	53	81	89	99	284	1632	94.3
71690	78	20	16	5	31	72	97	94	95	284	1632	94.3
76299	60	19	12	6	25	61.5	92	74	75	266	1496	86.5
74867	72	19	15	12	22	67.5	93	93	94	268	1637	94.6
74098	73	13	17	6	33	69	81	85	89	280	1563	90.3
73352	66	18	17	8	35	78	97	98	100	290	1702	98.4
74955	55	8	11	3	17	38.5	70	59	72	207	1381	79.8
85424	52	8	10	4	24	45.5	82	93	91	274	1603	92.7
73641	80	19	16	4	33	72	99	96	100	292	1655	95.7
72290	57	9	10	4	19	42	87	83	84	261	1524	88.1
72471	77	17	16	6	27	65.5	90	98	93	281	1642	94.9
74803	50	8	12	7	34	60.5	83	89	92	290	1620	93.6
72099	60	13	11	3	24	50.5	90	83	93	251	1606	92.8
71888	57	7	5	4	10	25.5	67	73	70	202	1410	81.5
71629	58	7	12	8	34	61	75	79	93	283	1569	90.7
76150	63	13	7	2	15	37	92	78	69	191	1431	82.7
74205	67	12	11	11	29	62.5	81	85	95	276	1616	93.4
74918	68	8	9	8	23	48	83	79	91	283	1565	90.5
76441	70	19	12	7	25	62.5	93	87	75	272	1557	90.0
75911	60	4	7	3	13	27	74	76	87	256	1543	89.2
75173	53	7	7	5	22	41	73	80	85	231	1536	88.8
73294	74	13	11	6	22	51.5	84	67	80	251	1532	88.6
72872	64	7	14	3	23	46.5	89	83	96	246	1581	91.4
70112	30	3	9	2	15	29	82	81	90	266	1589	91.8
73445	61	15	9	4	23	51	94	80	84	247	1523	88.0
70992	63	7	10	10	19	46	80	64	73	225	1438	83.1
74877	67	5	7	7	16	35	60	53	52	187	1253	72.4
73667	69	12	13	6	16	47	79	78	63	207	1374	79.4
71875	55	15	12	5	22	54	92	82	84	262	1594	92.1
70023	54	11	10	5	21	46.5	81	79	81	209	1505	87.0

71384	63	7	9	8	28	52	82	77	72	257	1420	82.1
76077	62	9	12	3	23	47	84	78	89	198	1507	87.1
71365	60	4	9	8	13	34	81	74	73	207	1388	80.2
70810	69	9	14	7	25	54.5	93	87	89	274	1611	93.1
76347	76	20	14	5	32	70.5	98	83	88	272	1594	92.1
71137	58	12	11	14	30	67	91	72	90	240	1557	90.0
76550	70	17	11	6	24	58	81	66	89	243	1512	87.4
71518	67	8	10	7	22	46.5	71	78	81	256	1422	82.2
70704	69	14	11	10	23	58	75	67	68	191	1330	76.9
72830	64	6	14	7	29	56	70	88	92	280	1602	92.6
72031	72	17	8	2	8	34.5	87	55	59	178	1266	73.2
72642	61	6	10	6	19	41	55	78	77	224	1461	84.5
74978	63	5	10	7	18	39.5	68	78	70	265	1505	87.0
73116	66	10	10	4	24	47.5	79	65	78	236	1490	86.1
71533	57	12	8	4	14	38	84	73	72	173	1424	82.3
75249	48	7	11	6	26	49.5	83	76	87	235	1481	85.6
75107	60	6	13	7	14	39.5	75	55	75	207	1383	79.9
74824	62	5	12	13	24	53.5	77	65	83	273	1463	84.6
73950	50	8	13	4	32	57	91	93	93	280	1657	95.8
73544	72	14	14	6	20	53.5	89	69	83	217	1475	85.3
72060	48	9	10	4	10	32.5	71	63	60	223	1353	78.2
76125	68	11	10	10	29	59.5	91	79	86	277	1567	90.6
73681	55	5	10	10	17	42	68	67	67	210	1406	81.3
76160	68	10	15	3	31	59	86	80	82	268	1508	87.2
71336	65	11	10	5	31	57	89	92	92	272	1619	93.6
72918	70	7	9	4	12	31.5	68	64	66	190	1365	78.9
71188	72	7	12	4	28	50.5	85	82	90	298	1617	93.5
76181	61	6	14	4	29	52.5	90	97	98	278	1661	96.0
72708	66	15	15	5	37	71.5	89	96	100	299	1685	97.4
70558	66	8	12	3	25	47.5	88	83	93	275	1574	91.0
73967	59	5	11	5	16	37	73	75	75	253	1479	85.5
45750	58	8	13	6	26	53	83	76	74	254	1490	86.1
73650	65	6	9	5	18	38	61	55	64	186	1213	70.1
73490	58	12	9	4	16	40.5	71	61	62	171	1369	79.1
70655	34	5	7	3	17	31.5	64	70	76	220	1408	81.4
70632	60	9	7	12	34	62	82	79	96	258	1552	89.7
71038	66	13	17	8	30	67.5	94	89	96	281	1629	94.2
72817	69	11	12	9	11	42.5	81	71	70	203	1422	82.2
70885	60	2	8	4	16	30	66	51	50	155	1231	71.2
71079	79	16	13	3	27	59	87	82	81	220	1497	86.5
75464	59	9	12	5	26	51.5	83	70	74	266	1477	85.4
76523	71	14	15	4	24	56.5	90	97	88	280	1648	95.3
73357	58	16	12	5	29	61.5	92	80	90	269	1581	91.4
72428	43	10	8	8	16	41.5	89	80	92	268	1586	91.7

76603	55	4	7	5	5	21	68	66	70	174	1348	77.9
75360	60	8	6	3	20	36.5	61	50	56	218	1351	78.1
74695	71	14	14	4	26	58	89	97	94	284	1655	95.7
74268	56	5	8	5	17	35	78	63	86	243	1517	87.7
74561	67	10	15	4	27	56	88	96	93	267	1608	92.9
74531	57	3	13	7	19	42	70	74	71	233	1429	82.6
70683	66	18	17	6	36	77	98	100	99	295	1699	98.2
73338	49	6	10	14	22	52	84	90	98	274	1641	94.9
73444	70	10	11	5	22	47.5	87	72	87	256	1553	89.8
72153	63	7	12	9	33	60.5	77	82	91	265	1575	91.0
70530	66	8	10	4	26	47.5	78	78	64	266	1507	87.1
74340	64	5	7	2	18	31.5	78	80	88	208	1473	85.1
70115	61	4	10	6	20	39.5	77	90	82	272	1556	89.9
70766	49	14	12	5	28	58.5	81	77	92	262	1500	86.7
73643	66	5	10	6	14	34.5	79	75	85	267	1527	88.3
73082	70	7	9	6	23	44.5	84	90	91	281	1591	92.0
70669	57	8	12	6	20	45.5	50	66	64	219	1350	78.0
76497	70	17	11	8	18	54	90	67	80	206	1471	85.0
71568	59	6	11	5	21	43	70	80	85	251	1511	87.3
73797	60	14	12	5	21	52	88	81	73	261	1513	87.5
70575	54	14	11	6	23	54	96	68	85	225	1506	87.1
74158	66	10	12	14	22	58	81	67	91	217	1494	86.4
75202	56	2	10	10	20	41.5	77	75	79	233	1474	85.2
72994	69	9	16	13	28	66	65	68	68	224	1427	82.5
73962	60	7	10	10	18	45	55	56	55	219	1343	77.6
73477	57	6	9	4	14	33	81	74	81	235	1521	87.9
72475	55	4	9	5	8	25.5	69	70	70	219	1414	81.7
71958	61	13	11	5	15	44	80	78	82	264	1542	89.1
76073	72	7	9	6	22	43.5	81	80	86	249	1526	88.2
72320	62	4	10	3	15	32	60	61	68	207	1236	71.4
71563	55	15	13	8	22	57.5	75	76	83	263	1538	88.9
76264	66	13	15	3	21	52	91	93	90	269	1600	92.5
75242	49	14	6	5	29	53.5	91	91	94	289	1665	96.2
70731	59	14	10	10	18	52	84	77	89	253	1594	92.1
73374	56	7	8	4	16	34.5	65	64	63	246	1383	79.9
70358	64	12	13	5	19	49	77	84	83	237	1537	88.8
76178	68	7	10	6	19	42	81	70	86	241	1515	87.6
75369	63	13	8	6	22	48.5	86	70	85	243	1496	86.5
71125	70	19	15	5	36	74.5	97	100	100	300	1714	99.1
70476	75	14	7	9	15	44.5	87	75	84	247	1526	88.2
73834	56	7	8	4	15	34	86	95	93	283	1642	94.9
74121	58	6	8	6	13	33	66	55	56	186	1254	72.5
70314	63	10	7	7	21	44.5	70	77	83	216	1455	84.1
72579	47	8	9	10	23	50	84	86	93	267	1574	91.0

71195	69	17	16	16	36	84.5	93	98	99	296	1692	97.8
77837	55	5	9	7	9	29.5	63	71	66	205	1349	78.0
73343	57	9	6	1	25	41	76	65	84	261	1483	85.7
73249	57	14	7	2	11	33.5	74	72	64	208	1311	75.8
75741	60	9	10	2	17	37.5	85	72	82	251	1524	88.1
72648	78	6	13	4	23	46	60	53	70	243	1355	78.3
75100	59	4	17	6	28	54.5	80	94	99	291	1645	95.1
71640	68	12	13	14	15	53.5	80	77	92	174	1436	83.0
71359	49	13	10	4	19	45.5	96	96	94	283	1676	96.9
70746	43	11	7	5	26	49	83	79	96	263	1577	91.2
70988	60	12	9	5	27	52.5	85	85	88	225	1527	88.3
74332	61	10	14	10	30	63.5	87	92	96	258	1615	93.4
72422	83	13	14	16	34	77	90	86	94	284	1640	94.8
70247	64	11	10	8	18	47	85	81	70	233	1513	87.5
71436	58	8	14	11	23	56	87	88	94	283	1634	94.5
72754	62	15	16	4	31	65.5	96	96	99	260	1648	95.3
72234	60	7	13	5	21	46	83	90	93	243	1588	91.8
71811	60	10	8	3	21	42	75	80	96	270	1579	91.3
73662	77	12	14	9	29	63.5	81	66	70	232	1461	84.5
73907	63	10	11	2	15	37.5	81	79	93	246	1531	88.5
70641	66	13	12		26	51	91	67	77	211	1393	80.5
75523	60	8	8	4	13	32.5	80	63	66	196	1365	78.9
71680	75	17	14	15	31	77	94	79	96	278	1638	94.7
70525	56	4	7	9	14	34	86	78	80	271	1478	85.4
72571	77	9	16	6	23	54	74	85	77	238	1489	86.1
71737	60	7	14	4	14	38.5	84	85	95	263	1613	93.2
75354	58	9	10	3	26	48	84	56	78	263	1460	84.4
70865	48	18	11	4	25	57.5	93	76	83	254	1508	87.2
75300	55	7	10	7	29	53	83	80	92	284	1569	90.7
72921	46	9	7	11	28	55	89	91	98	282	1648	95.3
72306	57	5	8	5	20	38	74	50	61	204	1438	83.1
75829	57	12	11	2	18	43	86	80	81	255	1537	88.8
72809	60	16	14	5	37	72	94	95	100	278	1667	96.4
71901	60	6	6	6	21	38.5	57	62	59	207	1307	75.5
70153	51	8	16	1	26	50.5	97	92	97	274	1654	95.6
70751	57	15	10	7	18	50	91	74	92	232	1540	79.8
74395	77	14	14	16	30	73.5	88	79	91	284	1534	88.7
73554	60	6	10	6	28	50	88	90	86	280	1600	92.5
73551	72	11	10	7	26	54	82	81	97	273	1558	90.1
74338	71	17	19	6	34	75.5	99	98	100	300	1716	99.2
72494	64	8	13	3	16	39.5	73	62	70	211	1293	74.7
72082	54	11	10	5	31	57	96	94	93	285	1676	96.9
70861	65	6	11	2	23	41.5	81	87	91	284	1601	92.5
73210	88	20	18	4	35	76.5	96	96	98	297	1695	98.0

72380	63	8	7	4	17	36	69	61	58	188	1294	74.8
70507	67	11	11	7	18	46.5	58	75	78	237	1395	80.6
74970	69	5	8	4	16	32.5	61	58	59	184	1309	75.7
70125	60	8	10	9	27	54	93	86	97	275	1637	94.6
73396	64	8	9	6	18	40.5	63	72	72	242	1481	85.6

Entrance Number	Ram 1 Tota	Ram2 English	Ram2 Physics	Ram2 Chenestry	Ram2 Math	Ram2 Total	High School English	High School Physics	High School Chemestry	High School Math	High School Total	High School Percentage
71165	54	10	13	8	20	50.5	66	68	66	204	1356	78.4
71862	56	4	12	3	30	49	65	81	85	296	1548	89.5
71280	56	7	9	10	22	47.5	68	76	86	280	1523	88.0
70257	55	15	6	3	13	37	78	65	80	228	1386	80.1
76234	57	7	13	3	19	42	64	59	70	184	1409	81.4
73951	70	13	11	10	27	61	87	88	86	272	1549	89.5
74111	83	8	14	7	23	52	80	76	80	232	1554	89.8
73737	59	5	6	5	14	30	66	58	75	185	1377	79.6
73719	59	4	10	4	14	31.5	61	62	61	229	1292	74.7
71757	69	15	16	13	23	66.5	87	78	82	199	1530	88.4
74223	68	18	8	4	18	48	89	81	82	260	1521	87.9
72388	78	18	16	18	37	89	89	95	94	299	1662	96.1
71996	55	7	12	7	17	43	78	89	92	267	1570	90.8
71945	57	10	12	6	6	33.5	87	71	78	171	1447	83.6
72240	46	9	14	10	31	64	90	93	98	286	1652	95.5
72709	89	20	16	8	30	73.5	93	94	92	258	1582	91.4
75185	55	9	6	2	14	31	83	71	88	224	1541	89.1
70527	57	6	11	7	23	46.5	51	81	94	264	1464	84.6
47483	60	8	10	3	19	39.5	80	85	80	279	1550	89.6
73783	57	7	5	5	17	33.5	83	75	70	211	1466	84.7
74392	77	16	9	5	26	55.5	88	64	83	233	1465	84.7
70042	65	12	16	5	34	66.5	91	88	90	230	1539	89.0
72856	59	4	8	10	13	34.5	69	87	86	255	1553	89.8
45309	40	4	8	2	18	32	80	92	82	269	1567	90.6
74165	72	11	17	8	36	72	87	91	98	300	1637	94.6
72922	61	17	16	3	36	71.5	95	98	98	281	1687	97.5
75053	54	17	13	15	25	69.5	95	89	100	273	1623	93.8
72923	70	3	10	6	23	42	54	54	59	242	1374	79.4
70895	57	7	7	6	22	42	70	74	84	233	1507	87.1
76237	64	9	14	11	25	58.5	79	76	74	196	1467	84.8
70583	67	9	12	7	12	40	68	61	62	208	1338	77.3
73781	56	6	8	10	17	41	74	78	85	257	1558	90.1
73659	69	20	17	3	37	77	96	99	100	300	1701	98.3
75661	60	4	8	5	23	40	78	58	77	220	1438	83.1
74295	60	8	8	7	11	34	60	66	67	167	1319	76.2
72008	60	7	12	9	28	56	65	78	87	276	1523	88.0
70535	61	7	8	2	16	32.5	63	69	64	206	1411	81.6
76588	57	11	13	10	22	55.5	84	82	93	250	1581	91.4
73420	26	7	5	3	12	26.5	71	62	69	234	1452	83.9

71936	67	3	15	7	31	56	75	83	90	289	1537	88.8
72834	49	12	13	4	20	48.5	93	81	84	268	1581	91.4
75407	60	4	3	3	10	19.5	85	81	70	253	1477	85.4
73217	78	19	17	10	26	72	86	89	91	292	1619	93.6
72931	62	7	8	6	16	37	80	86	95	266	1580	91.3
71899	65	5	12	7	28	51.5	73	77	92	266	1568	90.6
93219	49	4	5	7	12	28	80	81	83	221	1470	85.0
75533	64	7	12	4	28	51	75	69	82	266	1508	87.2
73140	54	11	10	7	26	53.5	85	94	90	251	1593	92.1
72558	51	10	6	4	22	42	90	88	79	245	1531	88.5
71671	69	7	13	9	27	55.5	65	73	68	241	1422	82.2
70332	68	3	11	3	21	38	58	64	72	186	1328	76.8
71182	60	4	12	10	26	52	82	71	93	269	1584	91.6
70671	65	3	10	7	17	37	82	79	81	255	1526	88.2
70170	60	6	7	5	10	27.5	67	59	69	184	1296	74.9
74639	75	11	13	6	23	53	88	50	57	188	1301	75.2
71831	57	10	12	11	24	56.5	90	88	97	275	1637	94.6
74186	79	14	13	5	21	53	92	90	92	285	1659	95.9
72844	60	5	10	11	20	45.5	71	75	81	265	1439	83.2
72319	66	6	8	1	18	32.5	74	69	74	203	1404	81.2
74091	70	16	10	6	22	53.5	93	77	93	240	1537	88.8
70422	60	11	15	3	21	49.5	93	96	100	283	1672	96.6
72634	63	17	11	1	26	54.5	93	89	84	254	1569	90.7
72480	54	5	13	8	5	30.5	77	77	71	186	1429	82.6
73556	59	10	15	12	29	65.5	83	74	77	283	1549	89.5
74084	57	5	8	8	10	31	73	63	88	206	1426	82.4
72047	71	7	6	6	26	44.5	73	90	19	266	1550	89.6
75567	62	7	7	3	13	30	75	69	72	196	1418	82.0
75373	73	5	10	14	16	45	64	77	82	199	1390	80.3
75077	55	4	13	6	17	39.5	62	85	100	266	1572	90.9
74693	66	18	13	15	17	63	88	82	74	241	1541	89.1
70817	58	10	10	4	17	41	80	86	82	258	1519	87.8
74470	69	8	15	8	33	64	78	94	90	277	1590	91.9
74495	75	9	12	4	29	54	87	97	96	279	1660	96.0
71580	53	12	13	3	28	55.5	81	91	93	276	1587	91.7
74837	63	20	15	4	30	68.5	98	95	94	280	1677	96.9
75047	59	11	12	3	22	47.5	81	88	82	254	1550	89.6
73799	58	15	11	11	16	52.5	68	62	52	201	1299	75.1
73549	69	11	11	4	28	53.5	82	92	98	296	1626	94.0
75116	72	8	11	10	13	41.5	75	50	67	164	1281	74.0
70767	53	9	9	5	6	28.5	79	66	78	250	1499	86.6
70834	40	8	10	6	20	44	85	91	100	257	1589	91.8
74694	56	15	11	11	34	70.5	85	85	79	277	1509	87.2
70404	63	4	10	6	26	45.5	80	78	79	272	1566	90.5

70188	60	8	11	3	21	43	86	82	85	239	1534	88.7
72279	54	8	7	2	18	35	62	53	59	242	1383	79.9
72131	61	13	11	9	27	59.5	77	66	64	231	1294	74.8
70156	61	7	12	3	20	41.5	79	80	87	276	1557	90.0
71944	57	6	9	3	8	25.5	63	60	60	180	1307	75.5
74734	69	14	8	5	26	53	84	63	71	234	1461	84.5
72626	57	4	9	3	20	36	63	53	64	189	1298	75.0
72496	59	19	14	3	27	62.5	94	87	87	266	1552	89.7
70414	55	5	7	9	15	35.5	59	61	61	191	1327	76.7
73819	56	8	8	4	12	32	75	65	60	154	1342	77.6
76282	66	7	14	4	34	59	86	95	93	292	1642	94.9
70173	75	15	18	5	36	74	95	97	98	299	1675	96.8
76454	57	8	14	11	27	59.5	88	99	97	293	1622	93.8
74471	62	8	9	5	21	42.5	73	84	67	201	1469	84.9
73243	71	6	11	4	26	46.5	72	81	84	268	1548	89.5
72114	77	16	14	5	29	63.5	91	82	83	247	1513	87.5
72780	63	9	13	8	15	45	71	55	61	208	1296	74.9
75103	81	13	9	6	10	37.5	83	70	85	256	1498	86.6
72010	67	11	11	6	21	48.5	81	79	81	227	1463	84.6
70533	62	7	11	5	23	46	73	75	72	238	1475	85.3
73261	67	20	10	7	20	56.5	87	90	95	280	1627	94.0
71078	76	20	18	6	33	76.5	92	92	92	294	1669	96.5
70181	53	18	9	6	28	60.5	96	83	82	217	1517	87.7
71342	47	10	6	6	17	38.5	89	77	94	264	1591	92.0
72273	76	20	15	5	34	73.5	97	95	86	292	1657	95.8
72535	69	14	14	4	30	62	80	84	83	266	1489	86.1
45815	54	7	3	6	13	29	75	85	76	229	1462	84.5
73426	57	7	13	4	22	46	65	78	84	259	1523	88.0
73986	59	6	9	2	12	28.5	73	77	87	181	1466	84.7
71560	64	5	11	2	16	33.5	63	73	77	228	1484	85.8
70501	66	7	10	6	16	39	71	81	79	256	1524	88.1
72097	53	12	14	7	20	52.5	79	81	89	257	1516	87.6
75086	57	8	10	3	20	40.5	68	50	50	169	1102	63.7
73941	56	19	11	2	28	59.5	92	78	75	251	1530	88.4
74692	75	17	17	5	19	57.5	94	91	93	268	1652	95.5
72160	63	9	10	3	23	44.5	59	78	85	259	1495	86.4
70993	57	9	11	10	25	54.5	77	74	87	257	1497	86.5
74442	69	11	15	3	22	50.5	82	81	91	271	1586	91.7
70961	63	5	5	4	13	27	82	71	82	240	1530	88.4
71927	54	7	12	6	17	41.5	83	76	88	220	1540	89.0
73609	70	17	16	4	12	49	96	88	97	250	1631	94.3
70209	73	3	10	8	13	33.5	61	74	73	189	1378	79.7
73930	66	11	17	8	22	57.5	81	84	96	268	1569	90.7
75513	63	8	12	6	29	54.5	82	89	89	227	1550	89.6

72292	47	5	12	9	22	48	78	84	80	249	1507	87.1
75740	66	9	15	7	27	58	74	79	80	245	1337	77.3
71301	78	19	15	6	28	68	97	93	94	278	1652	95.5
70349	81	9	13	3	19	43.5	72	56	64	209	1400	80.9
74178	57	6	14	7	26	52.5	82	93	95	277	1597	92.3
74924	67	9	12	1	26	48	89	93	99	292	1676	96.9
73683	62	17	11	11	24	62.5	88	81	84	233	1497	86.5
72197	69	17	14	5	33	68.5	92	88	77	252	1497	86.5
75721	70	11	16	4	37	68	95	93	100	300	1691	97.7
74020	57	7	10	8	19	44	72	65	68	187	1385	80.1
72883	71	14	13	10	28	65	91	87	87	262	1599	92.4
72259	57	5	4	5	8	22	75	72	60	229	1406	81.3
73436	59	8	14	5	22	48.5	83	80	86	273	1495	86.4
73153	56	6	10	9	10	35	86	76	85	213	1514	87.5
72811	51	5	11	11	32	59	86	89	91	292	1619	93.6
73088	75	16	17	6	34	73	98	98	99	300	1719	99.4
72404	60	9	11	9	27	56	85	89	94	286	1604	92.7
72040	73	3	1	5	7	16	86	68	70	210	1397	80.8
85116	63	13	14	5	32	64	96	98	99	292	1693	97.9
72722	60	9	10	5	32	55.5	81	78	78	280	1566	90.5
74578	56	6	8	7	21	41.5	82	86	99	280	1589	91.8
76392	72	15	8	16	31	70	92	72	81	285	1589	91.8
72637	57	7	6	6	13	32	69	66	65	195	1375	79.5
70576	63	9	9	5	12	34.5	54	50	62	208	1271	73.5
76292	48	6	11	3	14	34	81	82	91	277	1566	90.5
72316	61	9	11	5	14	38.5	82	65	75	249	1476	85.3
71627	62	12	15	4	23	53.5	95	91	97	266	1647	95.2
71539	56	5	10	11	19	45	72	78	87	238	1477	85.4
74757	60	3	10	1	15	29	68	64	82	219	1460	84.4
73342	78	18	13	16	31	77.5	96	96	99	295	1679	97.1
92142	51	5	11	5	21	41.5	63	81	73	199	1431	82.7
73637	44	8	8	14	21	50.5	87	93	91	256	1602	92.6
73602	60	2	8	2	10	21.5	72	86	78	256	1505	87.0
71789	25	6	12	4	26	47.5	74	91	93	276	1578	91.2
70402	57	6	8	12	16	41.5	61	82	84	243	1438	83.1
74834	57	11	14	7	23	54.5	90	96	96	271	1622	93.8
73900	55	14	12	11	27	63.5	89	91	99	277	1657	95.8
70642	57	7	11	4	21	42.5	82	93	97	274	1622	93.8
72684	65	11	12	8	20	51	94	89	82	280	1596	92.3
75616	77	5	6	5	12	27.5	64	68	69	198	1398	80.8
71385	52	6	14	5	26	51	87	85	94	276	1601	92.5
72369	67	13	12	7	24	56	87	74	86	249	1547	89.4
70884	76	18	16	6	30	69.5	88	88	86	253	1574	91.0
72069	63	5	9	3	13	30	75	76	90	241	1536	88.8

70119	63	8	12	8	22	50	90	84	95	273	1612	93.2
75461	57	4	7	6	12	28.5	73	72	80	257	1532	88.6
71032	87	19	16	9	36	79.5	99	99	100	300	1723	99.6
75875	43	3	6	7	14	30	61	72	80	247	1418	82.0
72249	56	11	15	9	19	54	77	67	80	202	1346	77.8
71552	59	15	14	12	23	64	83	58	76	243	1322	76.4
74674	57	5	11	4	25	44.5	72	92	99	282	1617	93.5
71161	56	4	6	3	18	30.5	68	60	62	204	1337	77.3
72721	72	9	14	12	22	56.5	76	73	68	263	1530	88.4
71616	53	11	16	12	29	67.5	88	90	98	293	1642	94.9
76035	57	17	7	9	10	42.5	91	64	75	152	1395	80.6
71187	65	10	15	8	27	60	85	85	73	290	1574	91.0
73676	52	10	13	1	22	45.5	87	74	87	275	1562	90.3
71564	65	20	12	6	29	66.5	88	78	91	265	1592	92.0
71489	53	13	11	5	32	60.5	78	78	87	277	1592	92.0
74612	65	11	13	11	26	61	96	78	95	274	1563	90.3
72839	62	11	12	4	21	48	82	69	90	211	1524	88.1
72606	75	16	13	5	25	58.5	93	88	70	284	1607	92.9
73418	66	15	15	7	30	66.5	91	96	96	297	1684	97.3
75709	60	6	13	2	29	49.5	71	79	76	244	1494	86.4
73724	78	9	12	13	17	50.5	77	80	83	270	1518	87.7
73440	87	19	19	6	38	82	97	100	100	300	1719	99.4
74656	66	18	13	5	16	52	82	61	66	165	1331	76.9
72678	63	18	16	10	23	66.5	89	70	86	235	1451	83.9
70873	57	4	9	6	12	31	61	75	75	203	1369	79.1
76377	65	7	10	5	29	51	89	89	98	290	1624	93.9
72862	58	16	14	3	33	66	95	99	100	295	1694	97.9
72132	57	16	11	10	28	64.5	90	86	84	246	1555	89.9
71987	59	13	13	8	21	54.5	84	90	82	257	1593	92.1
74888	57	9	11	8	16	43.5	72	70	87	258	1521	87.9
74523	56	10	14	14	30	67.5	86	84	94	290	1581	91.4
72308	61	8	10	13	25	56	86	81	89	251	1568	90.6
71876	57	12	9	6	21	48	77	56	64	231	1362	78.7
71420	61	9	12	3	22	46	77	79	77	221	1481	85.6
76216	56	7	12	6	17	41.5	81	77	91	257	1542	89.1
71255	57	6	8	6	17	36.5	73	82	75	232	1507	87.1
71054	63	17	13	13	27	69.5	86	87	92	274	1619	93.6
70691	43	17	10	9	9	45	87	73	78	201	1451	83.9
73901	66	7	8	6	9	29.5	73	54	71	205	1435	82.9
71295	57	2	6	3	7	18	88	76	77	179	1445	83.5
70228	76	13	15	4	33	64.5	95	94	92	296	1645	95.1
73195	60	9	12	8	9	38	82	73	78	204	1435	82.9
71341	72	7	12	3	27	49	72	78	86	251	1527	88.3
75089	75	9	10	7	23	48.5	84	72	98	262	1593	92.1

72771	58	3	9	5	15	32	88	83	92	254	1600	92.5
72477	49	3	10	6	14	33	81	88	88	258	1601	92.5
71977	72	5	9	6	18	37.5	56	59	51	158	1210	69.9
71061	58	4	11	6	22	43	57	73	71	212	1381	79.8
72347	59	7	13	6	19	45	84	79	96	294	1585	91.6
72547	78	10	13	4	21	47.5	68	89	85	232	1503	86.9
70676	70	18	12	4	27	61	83	88	90	260	1542	89.1
76271	62	10	12	9	29	60	92	89	96	270	1647	95.2
71946	56	7	9	8	15	38.5	89	64	83	228	1522	88.0
75836	57	5	12	4	24	44.5	72	90	88	250	1520	87.9
72500	68	8	10	5	28	50.5	66	59	60	253	1416	81.8
75418	60	5	10	4	21	40	56	54	66	196	1319	76.2
71218	55	7	7	2	9	24.5	66	52	63	191	1246	72.0
81813	51	19	7	9	11	45.5	92	56	60	198	1267	73.2
71183	57	5	8	13	12	37.5	67	76	80	222	1489	86.1
70825	66	7	13	3	25	48	69	68	89	235	1425	82.4
70601	53	14	18	13	25	69.5	92	95	95	287	1666	96.3
70416	85	17	15	15	33	79.5	88	85	87	293	1641	94.9
75171	54	8	8	10	23	48.5	77	80	66	242	1460	84.4
73264	56	13	8	5	15	40.5	66	51	52	204	1201	69.4
70943	68	8	12	2	33	55	74	95	94	287	1639	94.7
74474	58	7	11	7	28	52.5	83	94	99	281	1658	95.8
72802	57	14	16	7	25	61.5	93	95	98	283	1649	95.3
72136	84	17	19	17	39	92	95	96	89	291	1665	96.2
71545	52	18	14	7	29	67.5	99	92	100	279	1674	96.8
70552	31	7	9	2	12	30	74	60	64	219	1399	80.9
72636	59	7	9	5	19	40	58	61	61	232	1424	82.3
71815	67	19	8	8	14	48.5	75	50	58	190	1227	70.9
72080	43	7	7	8	16	37.5	71	52	61	190	1242	71.8
70796	73	13	18	7	34	71.5	75	94	93	281	1593	92.1
71062	50	9	12	4	22	46.5	83	83	69	268	1538	88.9
70240	49	14	8	7	26	55	75	58	70	256	1421	82.1
72383	75	18	13	5	35	71	98	95	98	278	1666	96.3
71648	59	8	9	7	25	48.5	69	84	73	267	1517	87.7
70818	65	12	12	6	18	48	80	68	70	247	1444	83.5
73335	61	15	12	7	24	58	92	85	92	277	1625	93.9
71911	57	5	11	10	18	43.5	87	76	79	261	1543	89.2
76491	66	4	15	3	24	46	76	78	82	245	1428	82.5
71367	63	4	13	2	25	43.5	59	78	80	282	1524	88.1
76527	66	10	17	2	36	65	89	91	94	292	1641	94.9
73282	59	17	12	4	29	61.5	95	79	89	280	1587	91.7
70945	69	17	12	2	29	60	97	88	92	265	1632	94.3
74629	66	15	13	3	28	58.5	95	88	99	290	1686	97.5
72734	66	7	10	1	8	25.5	79	79	77	225	1498	86.6

74422	68	6	10	4	31	51	65	83	82	281	1489	86.1
74379	57	10	12	13	14	49	89	85	87	242	1556	89.9
70693	63	8	11	10	31	59.5	90	95	98	296	1677	96.9
75874	62	6	11	8	18	42.5	73	55	58	241	1357	78.4
72014	69	13	13	5	20	50.5	89	81	86	250	1508	87.2
70456	61	18	13	3	30	64	89	81	87	259	1536	88.8
74511	61	17	11	9	18	54.5	95	64	74	230	1415	81.8
73399	82	19	11	5	30	65	96	93	90	276	1607	92.9
70776	69	8	11	2	30	51	93	98	100	290	1673	96.7
72058	55	11	12	6	28	56.5	88	92	94	291	1661	96.0
71615	52	8	12	8	28	55.5	86	98	97	283	1618	93.5
73552	62	7	6	5	15	33	59	61	53	166	1228	71.0
75066	57	6	10	4	25	44.5	62	85	81	282	1521	87.9
74464	66	8	10	5	23	45.5	78	61	87	244	1514	87.5
70758	64	6	14	5	34	58.5	76	95	95	270	1617	93.5
70455	51	19	13	10	20	61.5	93	81	91	262	1563	90.3
73887	53	4	12	11	25	51.5	63	67	90	247	1511	87.3
75517	68	13	10	10	17	49.5	94	92	95	264	1641	94.9
74456	58	6	8	5	11	29.5	83	77	75	254	1570	90.8
72674	55	12	12	11	24	58.5	93	91	95	277	1636	94.6
71256	63	8	14	5	26	52.5	71	82	81	254	1446	83.6
74393	58	19	16	4	33	71.5	94	88	95	289	1645	95.1
74046	54	8	10	5	20	42.5	80	72	90	282	1560	90.2
74558	50	5	9	5	16	34.5	79	91	95	264	1533	88.6
72894	57	11	13	6	24	54	92	93	94	264	1623	93.8
71651	81	11	17	17	37	81.5	69	88	90	267	1541	89.1
71565	59	8	7	6	13	33.5	58	50	61	207	1241	71.7
70333	54	12	10	4	20	45.5	85	85	97	254	1598	92.4
72237	72	8	11	5	26	50	80	72	74	250	1446	83.6
72103	63	17	13	11	28	68.5	95	92	96	279	1655	95.7
72208	56	5	11	9	25	49.5	85	93	91	267	1621	93.7
75585	74	12	11	3	27	52.5	75	89	84	246	1497	86.5
72345	70	11	18	12	29	70	77	79	80	251	1508	87.2
75720	59	6	11	3	16	36	72	74	72	219	1457	84.2
70468	53	19	12	5	32	67.5	97	84	96	289	1594	92.1
75166	60	3	10	5	13	31	67	61	77	187	1370	79.2
74450	63	16	10	3	17	45.5	87	83	87	251	1580	91.3
76613	59	5	11	7	12	34.5	69	53	52	172	1229	71.0
70069	48	9	8	10	20	47	92	94	91	282	1633	94.4
75448	58	6	7	7	8	27.5	87	92	80	247	1572	90.9
72499	49	6	11	3	29	48.5	79	83	100	255	1529	88.4
75143	56	5	12	9	23	48.5	70	84	91	267	1536	88.8
70999	59	10	6	5	16	36.5	85	91	94	248	1585	91.6
70146	62	3	10	6	18	37	56	54	59	218	1340	77.5

70369	79	15	18	3	35	71	97	98	98	297	1703	98.4
72528	73	10	14	6	25	55	82	81	87	282	1589	91.8
72046	50	3	5	2	20	29.5	65	69	80	271	1383	79.9
72810	51	8	9	8	22	47	89	90	95	216	1564	90.4
71360	65	10	13	4	28	55	81	91	90	283	1611	93.1
71406	72	10	13	6	28	56.5	58	60	65	223	1366	79.0
74953	49	3	9	5	15	32	89	66	91	251	1493	86.3
82031	46	5	12	2	8	26.5	69	65	80	213		82.0
72211	68	11	9	5	28	53	85	73	91	270	1569	90.7
74696	62	17	12	5	18	52	89	94	96	255	1607	92.9
70559	50	19	11	5	24	59	96	82	94	273	1605	92.8
72439	60	6	9	2	27	44	75	84	97	288	1635	94.5
73439	78	11	13	6	29	58.5	89	90	96	263	1647	95.2
72094	84	20	17	3	40	79.5	96	99	100	300	1698	98.2
71245	43	9	8	4	17	38	85	87	96	266	1562	90.3
74974	64	19	11	4	20	53.5	95	87	93	253	1596	92.3
74015	62	3	14	5	28	49.5	63	86	91	275	1554	89.8
76440	75	17	17	7	30	71	94	95	91	276	1600	92.5
70858	70	16	8	4	21	48.5	89	85	84	243	1569	90.7
74271	69	8	16	3	31	57.5	84	82	89	288	1550	89.6
72577	59	11	9	5	20	44.5	69	68	65	190	1304	75.4
76280	79	18	16	6	28	67.5	91	83	89	258	1528	88.3
70672	59	7	13	7	16	42.5	58	68	66	195	1347	77.9
46071	58	7	15	5	29	55.5	88	97	95	297	1653	95.5
80643	63	6	7	9	16	38	80	77	88	277	1565	90.5
72757	67	6	11	5	28	49.5	75	86	92	391	1619	93.6
76230	53	5	10	4	27	45.5	81	81	80	245	1546	89.4
72445	81			1	1	2	80	82	75			80.0
70663	57	5	12	1	11	29	64	59	63	172	1290	74.6
74548	70	15	13	4	13	45	92	79	75	254	1519	87.8
72268	65	9	9	14	26	58	76	84	89	265	1557	90.0
71950	57	6	8	8	19	40.5	74	73	79	233	1505	87.0
88382	40	8	5	3	15	31	69	73	91	228	1498	86.6
75131	53	15	16	6	27	64	88	84	82	267	1536	88.8
72025	54	6	8	8	21	43	76	90	84	269	1568	90.6
72265	66	12	10	4	15	40.5	70	76	86	220	1386	80.1
70171	75	9	14	7	23	53	74	60	69	176	1345	77.7
74603	70	5	17	17	26	64.5	75	78	80	249	1408	81.4
73842	65	6	8	6	27	46.5	83	88	95	293	1633	94.4
75466	62	7	11	4	15	36.5	85	86	78	271	1568	90.6
75370	53	12	9	6	13	39.5	90	80	89	245	1559	90.1
73539	71	13	6	5	19	43	78	73	74	206	1447	83.6
70400	63	7	9	6	18	39.5	66	57	60	241	1280	74.0
72318	57	18	12	6	28	64	94	92	96	279	1650	95.4

70317	59	6	11	4	15	35.5	62	71	66	200	1355	78.3
70773	60	9	6	7	16	38	62	57	54	201	1305	75.4
73451	66	8	9	3	20	40	72	83	94	266	1578	91.2
71592	69	14	13	14	16	56.5	87	87	99	225	1576	91.1
71597	61	12	9	2	17	39.5	71	81	92	251	1558	90.1
70926	75	12	11	6	21	49.5	96	93	88	283	1650	95.4
71498	66	8	11	11	18	47.5	82	80	80	266	1549	89.5
71466	78	9	14	11	25	58.5	78	83	75	263	1546	89.4
74239	64	9	12	4	14	38.5	83	84	93	269	1609	93.0
76481	51	13	10	7	19	48.5	91	90	95	249	1621	93.7
76540	61	9	14	12	30	64.5	88	89	100	274	1659	95.9
75718	55	5	6	5	10	26	55	83	72	211	1423	82.3
73429	64	8	8	9	22	46.5	61	75	72	251	1411	81.6
70593	69	8	8	7	31	54	80	71	83	246	1483	85.7
72502	52	6	13	5	28	52	75	86	95	290	1588	91.8
72194	57	6	6	2	21	34.5	80	84	78	232	1532	88.6
72218	77	11	9	13	21	53.5	86	84	97	243	1601	92.5
70218	77	12	8	7	25	51.5	95	83	94	274	1596	92.3
73428	68	14	10	13	26	62.5	93	85	91	232	1568	90.6
71411	66	5	11	5	15	35.5	90	62	69	253	1446	83.6
72005	56	7	11	6	19	42.5	79	85	94	225	1535	88.7
71495	77	15	13	6	27	61	94	84	86	253	1573	90.9
71149	60	4	9	4	23	40	64	85	94	261	1538	88.9
72671	78	6	17	17	27	66.5	75	88	94	272	1550	89.6
71009	57	10	13	8	23	53.5	84	77	67	222	1362	78.7
70248	66	10	12	7	29	58	85	87	74	266	1537	88.8
73764	63	6	14	6	20	46	59	79	92	205	1467	84.8
73645	53	5	8	3	18	34	72	76	82	232	1430	82.7
70052	75	17	15	5	31	68	92	87	97	280	1649	95.3
73084	64	10	12	7	24	53	83	88	90	282	1557	90.0
71821	65	12	8	8	26	54	91	90	89	276	1619	93.6
71719	62	5	6	3	19	33	59	71	67	238	1418	82.0
71543	54	8	8	8	16	39.5	86	85	84	217	1519	87.8
70229	76	18	15	7	37	76.5	94	98	87	285	1626	94.0
71486	63	8	12	4	29	53	85	84	89	267	1605	92.8
74942	66	9	10	3	32	53.5	90	95	97	282	1669	96.5
73610	57	10	16	4	16	45.5	81	85	87	262	1546	89.4
71749	66	7	15	16	38	76	92	93	99	297	1661	96.0
70471	69	16	12	12	26	65.5	90	82	96	272	1630	94.2
45229	40	5	8	5	9	27	70	81	93	276	1561	90.2
72195	84	20	14	4	27	64.5	91	67	74	225	1483	85.7
73925	79	11	10	4	16	40.5	86	66	70	243	1527	88.3
74941	69	9	14	12	20	54.5	78	63	82	231	1453	84.0
74866	63	6	10	6	18	40	78	91	97	275	1633	94.4

70503	57	6	11	3	13	32.5	88	61	74	202	1461	84.5
70191	60	7	10	3	18	37.5	76	81	91	251	1575	91.0
71031	55	11	14	2	29	56	82	87	89	257	1552	89.7
76044	83	16	13	6	31	65.5	83	80	81	245	1435	82.9
70281	61	4	9	4	14	31	73	51	53	217	1330	76.9
73126	56	12	12	12	27	63	95	95	97	261	1653	95.5
70356	57	15	11	6	21	52.5	85	86	87	271	1593	92.1
71730	60	6	7	3	29	44.5	86	83	97	289	1629	94.2
76310	69	15	12	13	25	64.5	85	78	81	251	1555	89.9
76075	61	10	14	10	32	65.5	88	84	92	280	1607	92.9
72504	81	14	12	4	32	61.5	90	91	100	288	1668	96.4
74826	57	4	12	5	22	43	61	52	66	207	1341	77.5
71447	57	6	8	4	22	40	79	69	83	240	1500	86.7
70323	57	9	10	12	21	52	87	80	78	249	1493	86.3
73364	63	6	9	5	12	32	71	58	60	206	1413	81.7
74770	62	12	12	6	19	49	81	86	82	286	1599	92.4
70821	69	14	17	6	32	68.5	96	95	99	294	1696	98.0
72493	81	17	13	2	34	65.5	87	91	90	296	1669	96.5
75299	57	5	7	4	12	27.5	63	63	76	220	1370	79.2
75443	61	9	7	11	24	51	70	78	78	259	1532	88.6
73260	75	19	15	3	16	52.5	93	65	75	218	1474	85.2
72779	79	18	16	11	35	80	94	97	94	273	1659	95.9
75521	55	4	12	1	14	30.5	69	52	57	187	1349	78.0
73749	66	6	9	5	25	44.5	81	77	94	282	1614	93.3
70178	65	5	13	15	29	62	67	72	81	260	1463	84.6
76206	70	19	13	3	28	63	98	86	98	296	1683	97.3
75510	63	5	7	5	11	27.5	77	81	87	247	1546	89.4
73235	61	5	13	4	22	44	70	86	95	266	1551	89.7
72351	67	14	10	6	28	58	93	94	96	291	1674	96.8
76556	63	7	11	10	23	51	87	86	84	279	1625	93.9
75041	81	15	14	8	33	69.5	91	93	94	267	1611	93.1
74229	60	14	15	8	30	67	99	98	99	300	1709	98.8
73405	73	18	14	6	30	67.5	97	92	99	300	1678	97.0
74677	56	3	10	6	14	33	62	69	79	214	1390	80.3
71443	74	11	13	3	25	52	80	89	91	269	1594	92.1
70043	63	8	12	5	14	38.5	87	75	65	229	1516	87.6
74583	61	11	10	5	13	39	74	62	60	199	1396	80.7
73401	70	5	10	6	17	38	69	71	67	208	1450	83.8
75654	63	4	11	9	16	39.5	61	59	65	193	1276	73.8
75393	58	15	8	6	27	55.5	91	91	80	262	1594	92.1
70647	71	13	15	16	32	76	95	96	97	286	1683	97.3
75165	57	8	9	6	17	39.5	80	75	65	246	1473	85.1
72283	86	16	18	6	34	74	86	97	100	281	1631	94.3
70526	76	16	18	6	36	75.5	94	97	96	290	1656	95.7

75415	69	15	10	12	27	63.5	92	85	96	267	1621	93.7
71156	54	17	12	6	29	64	85	79	87	249	1502	86.8
71647	72	15	11	9	19	54	85	82	85	166	1463	84.6
75060	57	7	10	8	23	47.5	87	59	82	241	1435	82.9
72171	44	11	9	2	19	41	90	76	85	252	1492	86.2
75335	59	6	11	7	32	55.5	78	80	85	241	1524	88.1
70605	55	16	10	6	15	46.5	82	69	70	210	1489	86.1
76144	45	9	8	5	11	32.5	80	71	89	242	1552	89.7
76232	64	7	12	4	15	37.5	61	76	87	219	1457	84.2
72693	81	19	13	4	26	62	90	88	92	226	1545	89.3
75184	62	8	13	12	21	54	90	75	93	261	1607	92.9
73162	44	6	14	6	19	45	80	83	90	265	1562	90.3
70801	57	8	9	12	21	50	78	82	77	266	1533	88.6
73198	69	18	14	6	35	72.5	95	98	95	290	1671	96.6
70615	72	17	16	8	35	75.5	86	91	96	291	1628	94.1
74742	66	9	13	2	34	58	92	93	99	276	1637	94.6
72366	66	13	14	11	26	63.5	94	84	79	258	1533	88.6
72519	49	9	19	5	32	65	87	87	90	270	1615	93.4
72128	63	8	10	8	13	39	73	77	71	241	1439	83.2
74951	76	19	17	17	25	78	96	95	94	292	1663	96.1
74607	78	12	16	5	28	60.5	98	98	99	295	1713	99.0
46711	56	7	15	12	24	58	68	84	80	257	1514	87.5
72581	69	6	8	11	16	40.5	68	77	81	213	1455	84.1
72291	64	10	9	5	21	45	78	73	69	249	1485	85.8
72864	55	7	11	6	18	41.5	72	69	77	235	1486	85.9
76253	67	12	13	5	29	58.5	85	92	93	276	1605	92.8
73031	58	11	7	10	14	42	85	66	80	220	1449	83.8
74718	56	5	12	7	29	53	69	78	79	285	1521	87.9
73346	66	10	14	4	17	44.5	76	77	83	236	1546	89.4
71497	72	17	12	6	25	59.5	96	87	91	287	1659	95.9
73302	64	18	9	11	15	53	87	57	58	208	1330	76.9
72759	62	5	17	7	25	54	83	94	96	281	1648	95.3
72742	56	9	8	5	12	34	93	86	86	225	1513	87.5
73811	71	9	15	4	31	59	83	92	96	293	1665	96.2
73542	57	7	9	5	18	39	80	90	97	274	1555	89.9
70342	67	12	15	5	20	52	91	93	90	283	1625	93.9
71590	45	5	7	6	27	44.5	75	85	87	270	1586	91.7
75626	72	7	11	6	31	55	87	82	87	257	1594	92.1
74721	66	11	14	6	21	52	88	73	84	231	1488	86.0
71572	59	16	9	4	29	57.5	93	86	93	238	1569	90.7
70477	70	20	12	4	30	65.5	96	87	49	266	1623	93.8
70242	57	6	10	5	15	36	69	60	72	208	1357	78.4
72659	68	13	11	3	19	45.5	87	74	92	255	1543	89.2
72673	72	19	12	6	30	67	94	86	87	284	1574	91.0

71645	67	11	4	2	10	27	87	73	79	201	1422	82.2
72474	77	5	10	5	19	39	78	88	86	264	1576	91.1
72406	46	11	6	2	17	35.5	72	58	72	202	1300	75.1
73774	59	6	11	7	17	40.5	84	76	71	194	1424	82.3
75325	56	10	10	9	22	50.5	70	60	52	252	1347	77.9
73044	66	4	11	10	25	50	72	87	91	281	1608	92.9
75912	53	4	9	1	17	30.5	78	69	89	248	1459	84.3
70722	71	15	14	5	26	59.5	95	91	95	290	1659	95.9
92562	73	4	12	6	12	33.5	73	63	72	203	1363	78.8
71537	57	6	11	6	21	44	84	88	98	272	1623	93.8
75138	57	4	11	8	22	44.5	60	60	87	253	1437	83.1
72117	64	13	9	7	23	52	90	86	96	259	1619	93.6
74462	55	8	11	2	14	34.5	81	73	79	197	1370	79.2
76104	59	10	8	8	16	41.5	91	50	75	203	1380	79.8
72324	81	19	17	7	33	76	96	95	98	293	1666	96.3
70201	89	14	18	4	28	63.5	72	81	84	252	1511	87.3
70121	64	5	7	2	20	33.5	62	59	69	235	1350	78.0
76024	58	4	12	7	22	45	73	56	78	236	1434	82.9
75690	45	6	9	2	8	25	61	62	73	180	1325	76.6
72710	57	5	11	5	15	36	79	90	97	268	1622	93.8
72315	55	11	13	8	24	56	88	67	77	234	1494	86.4
75689	57	7	11	10	20	48	50	68	74	243	1453	84.0
74896	76	15	12	6	27	59.5	88	85	89	261	1547	89.4
72138	61	6	12	3	33	54	77	77	89	257	1499	86.6
70334	62	10	12	10	24	55.5	88	93	100	282	1670	96.5
70770	55	6	12	4	16	38						81.3
76277	67	7	10	3	27	47	67	74	77	237	1424	82.3
73299	56	7	6	7	19	38.5	75	61	64	257	1396	80.7
71662	59	6	12	7	11	35.5	83	79	80	234	1530	88.4
70259	51	4	9	8	21	42	64	85	88	230	1469	84.9
71736	59	8	8	4	20	39.5	82	73	81	238	1465	84.7
75627	66	4	8	6	15	32.5	50	50	50	173	1224	70.8
73692	57	5	11	2	16	34	64	72	79	220	1461	84.5
76551	59	6	10	6	13	35	82	76	79	257	1547	89.4
71258	57	17	16	8	31	72	98	96	100	291	1652	95.5
72882	57	10	12	12	29	63	92	92	96	296	1675	96.8
75650	73	16	16	6	29	67	89	77	92	275	1586	91.7
75241	60	7	7	5	9	28	88	86	89	257	1599	92.4
73505	51	18	12	8	19	57	89	80	86	250	1506	87.1
47904	56	10	13	11	22	55.5	87	87	86	274	1585	91.6
74457	67	7	10	5	25	46.5	87	87	97	287	1625	93.9
73642	69	17	11	4	17	48.5	89	76	86	260	1562	90.3
75040	53	15	15	6	31	67	95	92	94	272	1636	94.6
71566	45	7	6	4	13	29.5	56	56	59	224	1298	75.0

73177	54	11	15	5	24	54.5	80	75	93	258	1562	90.3
73371	66	16	15	8	25	64	92	90	95	278	1605	92.8
70260	60	8	10	6	20	44	71	61	70	248	1419	82.0
72164	49	8	7	3	11	28.5	58	50	60	176	1299	75.1
71705	78	17	15	4	33	69	96	96	91	295	1647	95.2
75469	57	8	10	8	20	45.5	81	60	77	222	1469	84.9
72045	61	6	10	8	23	46.5	75	66	75	284	1548	89.5
74751	68	11	11	2	29	52.5	86	70	82	249	1506	87.1
70160	78	6	13	5	19	43	72	58	65	192	1305	75.4
72365	55	6	9	7	19	40.5	63	72	86	222	1397	80.8
70158	70	17	12	5	22	56	93	69	76	231	1485	85.8
75614	63	10	9	3	16	37.5	77	65	64	197	1365	78.9
71922	61	3	7	5	13	28	59	51	56	203	1283	74.2
47578	38	6	7	4	11	27.5	98	93	88	282	1662	96.1
74775	68	6	13	5	11	34.5	63	59	66	182	1337	77.3
72378	57	6	14	10	29	58.5	72	66	89	252	1412	81.6
74494	69	12	15	5	37	68.5	89	93	98	297	1663	96.1
70539	69	17	16	6	32	70.5	87	88	95	273	1593	92.1
72076	46	6	5	3	15	28.5	67	71	73	271	1473	85.1
72843	60	10	11	10	20	50.5	91	93	97	278	1651	95.4
72513	56	8	7	5	11	30.5	78	86	82	207	1491	86.2
71490	65	14	11	8	24	56.5	94	94	91	265	1636	94.6
74299	57	7	5	10	12	34	66	53	51	160	1243	71.8
74469	58	4	7	9	7	27	65	57	58	187	1279	73.9
73227	55	3	9	3	21	36	72	78	72	208	1482	85.7
70382	63	8	13	3	30	54	83	88	90	293	1545	89.3
70124	60	7	9	7	18	41	91	94	94	294	1660	96.0
73320	57	11	12	7	19	49	64	69	54	210	1397	80.8
72030	57	8	7	6	14	35	83	78	78	247	1515	87.6
70341	61	8	13	4	30	54.5	76	66	71	268	1487	86.0
72664	66	19	15	14	38	86	95	92	95	294	1594	92.1
76083	79	19	13	9	21	61.5	93	89	95	271	1624	93.9
72644	59	8	10	4	20	41.5	72	75	77	225	1448	83.7
70923	66	18	4	4	21	46.5	86	61	60	212	1376	79.5
70837	58	5	7	3	13	27.5	82	72	85	204	1488	86.0
70433	50	4	7	3	23	36.5	80	66	58	270	1465	84.7
72711	44	7	13	6	25	50.5	94	98	99	255	1630	94.2
71504	63	14	12	8	20	53.5	84	71	65	240	1409	81.4
70438	60	11	11	9	28	59	84	90	96	269	1619	93.6
72407	60	7	9	5	14	34.5	85	90	81	212	1532	88.6
72015	69	13	14	7	31	65	92	93	95	289	1660	96.0
73808	63	6	9	6	32	52.5	68	66	71	266	1499	86.6
72903	63	6	9	3	21	39	83	88	96	269	1604	92.7
71050	57	10	10	4	15	38.5	85	91	95	271	1552	89.7

71772	60	8	14	9	30	60.5	77	87	100	290	1661	96.0
71100	58	4	7	8	16	34.5	56	51	61	189	1299	75.1
70703	60	6	7	5	26	43.5	83	81	92	270	1591	92.0
75688	57	9	14	4	24	50.5	69	75	69	211	1413	81.7
70151	55	8	10	10	20	48	87	86	92	255	1574	91.0
75282	51	5	5	7	24	40.5	84	85	93	247	1603	92.7
75860	78	15	14	19	33	80.5	99	97	100	300	1669	96.5
74502	77	15	15	8	37	75	97	98	100	297	1702	98.4
73096	58	9	11	5	25	50	86	92	90	283	1600	92.5
71912	57	17	8	5	15	45	87	83	90	242	1478	85.4
73000	60	7	12	5	20	43.5	89	78	91	219	1476	85.3
76040	73	17	5	3	11	35.5	94	89	78	270	1493	86.3
72199	40	16	15	7	20	58	84	60	71	229	1278	73.9
73197	63	13	9	6	16	43.5	78	54	62	168	1305	75.4
73746	72	11	19	6	37	73	83	90	94	293	1627	94.0
72592	49	7	8	3	13	30.5	81	80	78	256	1533	88.6
74257	58	13	12	3	27	55	78	78	91	264	1524	88.1
71129	46	5	13	7	20	45	78	87	81	251	1556	89.9
70359	65	6	14	5	22	47	83	93	93	295	1626	94.0
72618	69	12	14	10	36	72	93	84	94	282	1608	92.9
70692	75	16	15	7	19	57	93	93	95	285	1679	97.1
71908	57	4	11	11	27	53	74	76	92	271	1573	90.9
74636	57	6	10	4	22	42	85	82	86	224	1511	87.3
72590	73	20	12	9	28	68.5	94	84	74	268	1566	90.5
74289	66	5	12	7	30	53.5	78	93	97	292	1604	92.7
72201	72	19	19	6	37	80.5	100	98	99	300	1718	99.3
71863	82	18	19	6	37	80	96	96	98	296	1686	97.5
72753	61	15	13	3	13	44	90	57	70	165	1397	80.8
70176	62	11	13	4	31	58.5	79	97	89	266	1606	92.8
75217	70	7	12	8	23	49.5	59	5	52	222	1338	77.3
73924	40	4	3	2	9	18	77	55	69	204	1346	77.8
73904	66	6	8	6	11	31	53	69	60	239	1445	83.5
72573	61	6	9	6	17	38	78	67	65	233	1399	80.9
73933	61	9	11	6	19	44.5	76	73	78	211	1463	84.6
73738	58	9	15	11	30	65	73	80	93	248	1529	88.4
74959	60	6	7	9	16	37.5	86	78	77	238	1485	85.8
73547	57	15	9	5	14	43	81	55	59	166	1217	70.3
75358	80	7	16	5	31	59	70	90	96	278	1617	93.5
72473	60	6	13	4	29	52	77	79	92	287	1621	93.7
71918	54	9	6	8	19	42	78	79	92	244	1556	89.9
72090	66	14	16	9	31	70	91	97	98	288	1669	96.5
71263	64	14	12	14	27	67	95	77	78	224	1522	88.0
74545	66	20	12	6	31	68.5	89	79	86	241	1470	85.0
72209	55	19	13	3	19	54	93	98	91	284	1634	94.5

74614	49	11	16	3	34	64	74	82	87	290	1551	89.7
71452	43	9	7	9	15	40	82	87	81	271	1583	91.5
71468	53	12	13	10	23	58	89	65	84	233	1546	89.4
72915	68	6	14	3	16	38.5	52	53	58	208	1295	74.9
74771	66	5	9	6	12	32	66	79	80	199	1483	85.7
72398	74	12	13	12	25	61.5	82	81	85	258	1546	89.4
73390	78	17	20	14	38	89	93	97	98	299	1697	98.1
75920	55	2	7	4	21	33.5	66	62	69	210	1384	80.0
71395	70	5	13	3	27	48	71	87	90	276	1482	85.7
74017	63	17	13	7	14	50.5	93	75	79	243	1494	86.4
72362	57	8	9	6	22	44.5	67	76	84	251	1462	84.5
70129	53	7	7	9	16	39	74	67	86	218	1421	82.1
76559	66	9	16	3	27	54.5	87	94	99	275	1671	96.6
70279	63	12	10	13	29	64	92	88	90	278	1618	93.5
71325	66	10	12	5	27	54	77	64	64	228	1359	78.6
76526	61	8	13	4	32	57	81	60	76	263	1410	81.5
71663	63	5	10	5	12	31.5	72	75	79	194	1454	84.0
71235	77	8	14	5	34	61	88	92	99	291	1632	94.3
73387	45	7	9	4	11	31	71	59	63	169	1326	76.6
73763	64	6	6	2	12	25.5	72	70	63	184	1352	78.2
73990	62	16	15	13	26	69.5	92	83	84	232	1546	89.4
70340	61	4	11	1	24	39.5	85	92	95	255	1615	93.4
76054	58	5	7	3	12	27	55	56	65	163	1312	75.8
76238	55	9	10	5	21	44.5	85	50	76	192	1362	78.7
72705	72	20	15	4	31	69.5	95	91	92	282	1639	94.7
73553	65	17	14	4	30	65	86	81	81	265	1546	89.4
70457	69	19	11	4	30	64	91	80	89	287	1582	91.4
72176	56	9	9	6	15	39	82	78	76	194	1315	76.0
71729	56	6	9	5	17	37	91	88	94	266	1623	93.8
70198	76	20	11	6	31	67.5	95	82	81	277	1565	90.5
70906	60	1	9	4	18	32	71	79	79	218	1441	83.3
70497	66	7	13	11	21	52	72	57	77	193	1356	78.4
73099	51	10	9	3	15	37	84	78	75	215	1483	85.7
75845	59	7	9	10	17	43	77	84	94	193	1589	82.3
75243	63	15	12	17	35	78.5	88	82	92	293	1617	93.5
70208	57	15	5	5	14	38.5	74	78	65	193	1315	76.0
74940	78	18	13	8	24	63	98	95	98	290	1684	97.3
72612	78	19	15	17	32	82.5	91	90	95	289	1628	94.1
73057	57	7	10	7	22	45.5	86	76	85	244	1556	89.9
70699	68	14	18	16	33	81	92	94	98	288	1628	94.1
71237	56	14	15	6	21	55.5	85	80	95	257	1569	90.7
70241	60	15	9	4	10	37.5	71	55	55	150	1210	69.9
70114	55	12	11	6	14	43	97	93	97	292	1668	96.4
74281	72	15	13	17	32	77	95	96	98	294	1694	97.9

72569	41	10	7	9	18	44	89	90	90	267	1572	90.9
73581	59	10	10	6	11	37	87	64	85	229	1408	81.4
72387	68	11	13	5	17	46	82	85	75	220	1452	83.9
72178	62	15	10	3	10	37.5	92	73	85	205	1489	86.1
72627	55	16	9	9	19	52.5	67	80	60	262	1378	79.7
70528	75	16	17	6	24	62.5	89	67	89	244	1463	84.6
75579	58	3	4	3	17	27	56	73	69	262	1437	83.1
73006	55	10	9	3	21	42.5	70	73	68	246	1426	82.4
72189	64	12	9	6	26	53	91	84	92	273	1602	92.6
75397	72	9	10	3	14	35.5	81	87	90	255	1569	90.7
74283	62	14	14	6	30	63.5	92	94	96	286	1655	95.7
75502	56	8	8	8	15	39	77	69	78	234	1497	86.5
48080	58	6	11	9	20	46	78	85	86	246	1548	89.5
76482	65	6	8	5	14	32.5	79	70	80	205	1417	81.9
75471	87	19	18	5	32	74	91	87	93	280	1637	94.6
72686	65	10	11	8	27	56	87	78	83	272	1555	89.9
70305	58	18	11	4	11	43.5	90	64	80	237	1464	84.6
73203	60	9	14	3	21	47	82	85	89	258	1551	89.7
70602	60	17	14	6	34	71	97	99	98	295	1708	98.7
73902	55	7	10	9	26	51.5	76	69	84	257	1535	88.7
70155	81	19	16	12	31	77.5	95	86	84	286	1561	90.2
75899	86	19	18	7	36	80	100	94	98	299	1690	97.7
71158	60	12	6	6	10	34	82	88	80	245	1505	87.0
74690	54	18	7	5	24	53.5	84	83	87	265	1462	84.5
74439	55	5	9	12	25	51	81	67	78	266	1469	84.9
71114	42	14	10	5	29	57.5	91	89	95	278	1647	95.2
71840	57	6	14	3	16	38.5	92	94	90	268	1631	94.3
73378	54	11	10	7	23	50.5	86	81	96	270	1606	92.8
73629	58	2	7	5	17	31	68	84	82	236	1521	87.9
76250	61	3	10	5	15	32.5	68	68	79	177	1403	81.1
74638	62	6	10	7	22	44.5	85	88	82	225	1538	88.9
70246	66	10	15	6	27	57.5	83	79	88	282	1562	90.3
75008	45	6	10	4	18	37.5	80	83	86	261	1531	88.5
71146	57	14	14	6	26	59.5	89	93	83	239	1517	87.7
70883	60	11	8	4	23	46	84	66	78	248	1437	74.5
70458	54	7	10	4	22	42.5	82	73	74	250	1506	87.1
70264	73	10	9	12	16	46.5	60	82	78	256	1479	85.5
76095	71	7	14	4	35	60	67	92	93	294	1616	93.4
73844	71	10	12	8	30	59.5	90	84	94	267	1616	93.4
76201	57	15	15	4	27	60.5	87	78	91	262	1606	92.8
73755	49	5	10	3	22	40	78	84	87	248	1548	89.5
70444	58	8	6	8	15	36.5	67	69	75	208	1379	79.7
70294	62	8	11	6	15	40	65	70	80	221	1416	81.8
74700	55	16	11	4	28	59	94	90	100	251	1632	94.3

73684	69	16	16	5	27	63.5	83	93	95	259	1567	90.6
70253	61	8	10	3	24	44.5	72	81	88	250	1511	87.3
73312	57	9	9	15	29	61.5	84	64	89	239	1488	86.0
74554	60	6	9	2	19	36	90	84	90	268	1609	93.0
75539	63	7	10	12	24	53	76	79	85	233	1491	86.2
71305	60	4	10	4	19	37	75	76	64	173	1365	78.9
72774	57	9	10	12	15	45.5	75	71	73	223	1484	85.8
71309	73	13	11	14	31	69	89	86	88	290	1626	94.0
76411	55	13	11	6	21	51	86	65	62	150	1359	78.6
76105	59	3	4	5	14	26	70	79	86	248	1516	78.5
73948	55	9	7	6	23	44.5	79	80	72	281	1552	89.7
72169	56	12	9	9	21	50.5	82	70	81	240	1485	85.8
87104	70	9	13	12	19	53	79	93	92	281	1637	94.6
70154	58	19	9	2	14	44	96	73	74	250	1457	84.2
76511	73	5	9	4	24	41.5	57	53	63	258	1342	77.6
74023	50	16	12	7	30	64.5	94	96	94	279	1606	92.8
72485	61	10	12	9	28	58.5	75	79	96	252	1538	88.9
75699	72	11	10	5	18	43.5	79	59	54	241	1379	79.7
74532	60	19	18	8	29	73.5	94	77	80	243	1525	88.2
74506	59	10	12	12	21	55	84	77	79	223	1507	87.1
72638	59	6	11	4	20	40.5	69	73	77	217	1430	82.7
72650	59	7	8	6	25	46	92	93	97	289	1651	95.4
70271	84	12	17	5	33	67	81	100	99	299	1692	97.8
72911	46	5	7	4	15	30.5	72	73	79	221	1472	85.1
73360	66	12	10	4	19	45	82	66	63	196	1355	78.3
72032	54	16	16	12	27	70.5	86	97	94	287	1636	94.6
70984	60	13	11	8	16	47.5	88	72	75	212	1415	81.8
72130	61	4	9	5	13	31	53	75	61	195	1366	79.0
75012	68	17	13	11	21	61.5	93	58	86	240	1510	87.3
72414	78	19	17	5	22	63	95	78	82	265	1576	91.1
76016	53	6	10	3	28	47	76	77	94	270	1566	90.5
71419	50	7	8	8	27	50	86	81	88	260	1548	89.5
71804	60	12	12	8	17	49	92	83	95	272	1624	93.9
73425	70	17	17	4	33	70.5	98	99	100	295	1707	98.7
70933	68	9	10	7	28	53.5	88	95	99	296	1691	97.7
76013	58	7	11	4	17	38.5	83	61	83	242	1495	86.4
73223	78	8	11	6	26	51	86	73	73	241	1536	88.8
70431	68	10	13	6	17	46	81	62	72	206	1422	82.2
74192	63	14	13	4	22	52.5	90	95	94	288	1647	95.2
73094	61	7	13	6	29	55	96	91	100	290	1673	96.7
72157	60	13	11	11	18	53	88	88	93	253	1588	91.8
74878	58	9	12	5	12	37.5	79	74	81	220	1449	83.8
73058	69	10	14	5	28	56.5	84	96	97	294	1649	95.3
71948	57	5	12	6	18	41	55	55	76	210	1369	79.1

73489	66	7	10	8	18	42.5	77	82	90	252	1513	87.5
48157	57	13	12	6	17	47.5	87	83	94	266	1603	92.7
72375	57	7	10	8	28	52.5	76	86	84	269	1500	86.7
70504	56	4	9	1	11	25	66	60	59	200	1306	75.5
85914	85	16	14	5	38	73	95	92	97	297	1652	95.5
76598	62	8	10	5	22	45	74	69	65	208	1371	79.2
72451	88	16	16	6	36	73.5	84	91	97	279	1656	95.7
70443	71	7	13	5	18	42.5	67	67	80	208	1376	79.5
75381	62	16	13	8	27	64	94	79	93	258	1595	92.2
72363	66	9	14	5	20	47.5	84	87	89	286	1609	93.0
73147	60	13	13	6	30	61.5	84	89	88	266	1584	91.6
76599	60	6	5	2	16	29	63	61	78	201	1293	74.7
71546	62	6	10	4	16	36	63	56	62	168	1356	78.4
76120	63	16	13	4	25	57.5	86	84	79	284	1542	89.1
72756	68	18	10	5	11	43.5	94	88	94	283	1626	94.0
70844	63	9	14	5	28	55.5	89	96	99	281	1661	96.0
73560	62	16	13	5	19	53	83	61	57	227	1332	77.0
72134	63	6	10	10	19	44.5	76	62	58	256	1420	82.1
74599	75	8	15	4	18	44.5	80	72	91	208	1513	87.5
73052	53	6	9	4	14	32.5	72	65	76	233	1351	78.1
71806	76	13	13	7	29	62	87	90	95	283	1611	93.1
76309	72	19	11	9	20	58.5	92	75	89	235	1490	86.1
70100	54	9	14	3	27	53	73	97	88	283	1609	93.0
72597	56	10	9	8	20	46.5	78	61	84	253	1474	85.2
74519	75	8	8	7	12	34.5	82	85	81	218	1639	84.9
71065	74	13	16	9	24	62	92	86	85	280	1615	93.4
73385	75	14	19	20	36	88.5	87	87	94	273	1531	88.5
75551	55	10	5	7	9	31	72	55	58	150	1267	73.2
70403	60	9	8	5	16	37.5	76	89	71	278	1521	87.9
73066	66	14	20	5	33	71.5	90	93	98	287	1639	94.7
74135	88	18	15	11	26	69.5	92	73	86	270	1517	87.7

73575	57	8	7	3	20	38	69	66	88	216	1480	85.5
72116	63	12	10	10	22	53.5	87	73	86	226	1494	86.4
72550	80	15	15	5	36	71	92	96	97	288	1667	96.4
75062	58	8	8	2	27	44.5	79	67	85	273	1540	89.0
73883	63	5	14	6	21	46	61	55	58	211	1270	73.4
72656	57	8	12	6	20	45.5	78	90	99	285	1607	92.9
76359	55	5	14	5	11	35	65	68	69	237	1420	82.1
74285	76	7	11	8	11	37	61	61	74	196	1307	75.5
72765	60	4	11	6	21	41.5	66	81	87	260	1500	86.7
74591	74	13	12	14	34	72.5	89	91	90	287	1661	96.0
74543	62	4	9	5	15	32.5	71	72	80	225	1463	84.6
71326	56	13	11	7	14	44.5	77	57	57	156	1252	72.4
70272	68	8	13	5	20	46	73	57	65	242	1436	83.0
70664	51	6	11	6	21	43.5	79	94	99	288	1647	95.2
70391	74	12	14	4	25	55	81	88	94	291	1632	94.3
75422	73	6	11	4	24	45	58	70	60	200	1248	72.1
76218	49	4	6	2	17	28.5	88	80	92	269	1546	89.4
74275	58	9	11	3	19	41.5	78	64	78	207	1443	83.4
74889	61	17	16	15	38	86	95	96	100	291	1672	96.6
76301	55	7	12	9	18	45.5	72	75	85	250	1442	83.4
74429	64	10	13	5	21	49	75	88	78	241	1526	88.2
75159	56	7	6	5	12	30	77	63	56	227	1400	80.9
73898	60	7	8	5	15	34.5	57	54	77	174	1413	73.2
72775	56	7	9	8	15	39	84	69	62	206	1262	72.9
72269	57	7	5	4	14	30	72	70	70	194	1234	71.3
71463	79	14	10	7	21	51.5	89	87	95	244	1619	93.6
70405	73	15	9	4	21	48.5	85	73	74	279	1526	88.2
72782	57	5	6	6	14	30.5	51	55	51	172	1167	67.5
71096	82	19	18	4	31	71.5	91	88	86	295	1605	92.8
70302	80	18	18	4	31	71	97	95	97	286	1662	96.1
72515	60	9	12	5	21	46.5	63	69	60	188	1328	76.8
73713	66	11	15	12	34	72	95	92	98	293	1692	97.8
70090	61	5	8	5	14	31.5	89	90	94	277	1628	94.1
74224	61	13	9	4	20	45.5	84	75	62	204	1402	81.0
76327	58	9	11	8	22	50	80	84	98	281	1604	92.7
75216	54	5	6	7	14	32	71	60	71	256	1454	84.0
72816	66	15	14	3	21	52.5	87	88	89	260	1519	87.8
73157	75	7	11	4	17	39	82	85	74	228	1532	88.6
72483	48	5	10	7	18	40	60	79	80	213	1447	83.6
74258	66	15	11	6	20	51.5	86	84	92	259	1584	91.6
72646	81	16	11	8	36	70.5	94	97	95	287	1668	96.4
73135	70	17	16	7	37	76.5	97	95	100	300	1712	99.0
76081	58	8	6	5	18	37	51	67	76	192	1360	78.6
71041	63	18	14	6	29	67	91	95	97	281	1629	94.2

74637	82	18	16	7	36	76.5	100	100	98	277	1681	97.2
75457	56	12	7	6	27	51.5	82	82	88	255	1592	92.0
74215	69	20	15	10	24	68.5	82	77	78	267	1519	87.8
73695	56	13	11	12	19	55	93	81	80	240	1513	87.5
72622	72	7	4	10	19	39.5	93	90	93	285	1597	92.3
73060	56	6	14	2	17	38.5	72	82	91	251	1469	84.9
49408	62	6	10	3	22	41	84	87	96	291	1650	95.4
71021	60	15	10	3	20	47.5	90	74	81	220	1466	84.7
71370	63	10	15	11	31	66.5	84	85	88	281	1588	91.8
74479	52	8	8	6	30	51.5	75	77	81	261	1490	86.1
74099	64	7	12	5	11	35	74	60	58	192	1338	77.3
71591	73	11	15	2	29	57	87	93	92	237	1568	90.6
72580	63	6	9	3	15	33	71	84	74	236	1467	84.8
74080	68	15	10	3	14	42	86	62	68	159	1359	78.6
73788	51	6	14	5	28	53	81	89	99	284	1632	94.3
71690	78	20	16	5	31	72	97	94	95	284	1632	94.3
76299	60	19	12	6	25	61.5	92	74	75	266	1496	86.5
74867	72	19	15	12	22	67.5	93	93	94	268	1637	94.6
74098	73	13	17	6	33	69	81	85	89	280	1563	90.3
73352	66	18	17	8	35	78	97	98	100	290	1702	98.4
74955	55	8	11	3	17	38.5	70	59	72	207	1381	79.8
85424	52	8	10	4	24	45.5	82	93	91	274	1603	92.7
73641	80	19	16	4	33	72	99	96	100	292	1655	95.7
72290	57	9	10	4	19	42	87	83	84	261	1524	88.1
72471	77	17	16	6	27	65.5	90	98	93	281	1642	94.9
74803	50	8	12	7	34	60.5	83	89	92	290	1620	93.6
72099	60	13	11	3	24	50.5	90	83	93	251	1606	92.8
71888	57	7	5	4	10	25.5	67	73	70	202	1410	81.5
71629	58	7	12	8	34	61	75	79	93	283	1569	90.7
76150	63	13	7	2	15	37	92	78	69	191	1431	82.7
74205	67	12	11	11	29	62.5	81	85	95	276	1616	93.4
74918	68	8	9	8	23	48	83	79	91	283	1565	90.5
76441	70	19	12	7	25	62.5	93	87	75	272	1557	90.0
75911	60	4	7	3	13	27	74	76	87	256	1543	89.2
75173	53	7	7	5	22	41	73	80	85	231	1536	88.8
73294	74	13	11	6	22	51.5	84	67	80	251	1532	88.6
72872	64	7	14	3	23	46.5	89	83	96	246	1581	91.4
70112	30	3	9	2	15	29	82	81	90	266	1589	91.8
73445	61	15	9	4	23	51	94	80	84	247	1523	88.0
70992	63	7	10	10	19	46	80	64	73	225	1438	83.1
74877	67	5	7	7	16	35	60	53	52	187	1253	72.4
73667	69	12	13	6	16	47	79	78	63	207	1374	79.4
71875	55	15	12	5	22	54	92	82	84	262	1594	92.1
70023	54	11	10	5	21	46.5	81	79	81	209	1505	87.0

71384	63	7	9	8	28	52	82	77	72	257	1420	82.1
76077	62	9	12	3	23	47	84	78	89	198	1507	87.1
71365	60	4	9	8	13	34	81	74	73	207	1388	80.2
70810	69	9	14	7	25	54.5	93	87	89	274	1611	93.1
76347	76	20	14	5	32	70.5	98	83	88	272	1594	92.1
71137	58	12	11	14	30	67	91	72	90	240	1557	90.0
76550	70	17	11	6	24	58	81	66	89	243	1512	87.4
71518	67	8	10	7	22	46.5	71	78	81	256	1422	82.2
70704	69	14	11	10	23	58	75	67	68	191	1330	76.9
72830	64	6	14	7	29	56	70	88	92	280	1602	92.6
72031	72	17	8	2	8	34.5	87	55	59	178	1266	73.2
72642	61	6	10	6	19	41	55	78	77	224	1461	84.5
74978	63	5	10	7	18	39.5	68	78	70	265	1505	87.0
73116	66	10	10	4	24	47.5	79	65	78	236	1490	86.1
71533	57	12	8	4	14	38	84	73	72	173	1424	82.3
75249	48	7	11	6	26	49.5	83	76	87	235	1481	85.6
75107	60	6	13	7	14	39.5	75	55	75	207	1383	79.9
74824	62	5	12	13	24	53.5	77	65	83	273	1463	84.6
73950	50	8	13	4	32	57	91	93	93	280	1657	95.8
73544	72	14	14	6	20	53.5	89	69	83	217	1475	85.3
72060	48	9	10	4	10	32.5	71	63	60	223	1353	78.2
76125	68	11	10	10	29	59.5	91	79	86	277	1567	90.6
73681	55	5	10	10	17	42	68	67	67	210	1406	81.3
76160	68	10	15	3	31	59	86	80	82	268	1508	87.2
71336	65	11	10	5	31	57	89	92	92	272	1619	93.6
72918	70	7	9	4	12	31.5	68	64	66	190	1365	78.9
71188	72	7	12	4	28	50.5	85	82	90	298	1617	93.5
76181	61	6	14	4	29	52.5	90	97	98	278	1661	96.0
72708	66	15	15	5	37	71.5	89	96	100	299	1685	97.4
70558	66	8	12	3	25	47.5	88	83	93	275	1574	91.0
73967	59	5	11	5	16	37	73	75	75	253	1479	85.5
45750	58	8	13	6	26	53	83	76	74	254	1490	86.1
73650	65	6	9	5	18	38	61	55	64	186	1213	70.1
73490	58	12	9	4	16	40.5	71	61	62	171	1369	79.1
70655	34	5	7	3	17	31.5	64	70	76	220	1408	81.4
70632	60	9	7	12	34	62	82	79	96	258	1552	89.7
71038	66	13	17	8	30	67.5	94	89	96	281	1629	94.2
72817	69	11	12	9	11	42.5	81	71	70	203	1422	82.2
70885	60	2	8	4	16	30	66	51	50	155	1231	71.2
71079	79	16	13	3	27	59	87	82	81	220	1497	86.5
75464	59	9	12	5	26	51.5	83	70	74	266	1477	85.4
76523	71	14	15	4	24	56.5	90	97	88	280	1648	95.3
73357	58	16	12	5	29	61.5	92	80	90	269	1581	91.4
72428	43	10	8	8	16	41.5	89	80	92	268	1586	91.7

76603	55	4	7	5	5	21	68	66	70	174	1348	77.9
75360	60	8	6	3	20	36.5	61	50	56	218	1351	78.1
74695	71	14	14	4	26	58	89	97	94	284	1655	95.7
74268	56	5	8	5	17	35	78	63	86	243	1517	87.7
74561	67	10	15	4	27	56	88	96	93	267	1608	92.9
74531	57	3	13	7	19	42	70	74	71	233	1429	82.6
70683	66	18	17	6	36	77	98	100	99	295	1699	98.2
73338	49	6	10	14	22	52	84	90	98	274	1641	94.9
73444	70	10	11	5	22	47.5	87	72	87	256	1553	89.8
72153	63	7	12	9	33	60.5	77	82	91	265	1575	91.0
70530	66	8	10	4	26	47.5	78	78	64	266	1507	87.1
74340	64	5	7	2	18	31.5	78	80	88	208	1473	85.1
70115	61	4	10	6	20	39.5	77	90	82	272	1556	89.9
70766	49	14	12	5	28	58.5	81	77	92	262	1500	86.7
73643	66	5	10	6	14	34.5	79	75	85	267	1527	88.3
73082	70	7	9	6	23	44.5	84	90	91	281	1591	92.0
70669	57	8	12	6	20	45.5	50	66	64	219	1350	78.0
76497	70	17	11	8	18	54	90	67	80	206	1471	85.0
71568	59	6	11	5	21	43	70	80	85	251	1511	87.3
73797	60	14	12	5	21	52	88	81	73	261	1513	87.5
70575	54	14	11	6	23	54	96	68	85	225	1506	87.1
74158	66	10	12	14	22	58	81	67	91	217	1494	86.4
75202	56	2	10	10	20	41.5	77	75	79	233	1474	85.2
72994	69	9	16	13	28	66	65	68	68	224	1427	82.5
73962	60	7	10	10	18	45	55	56	55	219	1343	77.6
73477	57	6	9	4	14	33	81	74	81	235	1521	87.9
72475	55	4	9	5	8	25.5	69	70	70	219	1414	81.7
71958	61	13	11	5	15	44	80	78	82	264	1542	89.1
76073	72	7	9	6	22	43.5	81	80	86	249	1526	88.2
72320	62	4	10	3	15	32	60	61	68	207	1236	71.4
71563	55	15	13	8	22	57.5	75	76	83	263	1538	88.9
76264	66	13	15	3	21	52	91	93	90	269	1600	92.5
75242	49	14	6	5	29	53.5	91	91	94	289	1665	96.2
70731	59	14	10	10	18	52	84	77	89	253	1594	92.1
73374	56	7	8	4	16	34.5	65	64	63	246	1383	79.9
70358	64	12	13	5	19	49	77	84	83	237	1537	88.8
76178	68	7	10	6	19	42	81	70	86	241	1515	87.6
75369	63	13	8	6	22	48.5	86	70	85	243	1496	86.5
71125	70	19	15	5	36	74.5	97	100	100	300	1714	99.1
70476	75	14	7	9	15	44.5	87	75	84	247	1526	88.2
73834	56	7	8	4	15	34	86	95	93	283	1642	94.9
74121	58	6	8	6	13	33	66	55	56	186	1254	72.5
70314	63	10	7	7	21	44.5	70	77	83	216	1455	84.1
72579	47	8	9	10	23	50	84	86	93	267	1574	91.0

71195	69	17	16	16	36	84.5	93	98	99	296	1692	97.8
77837	55	5	9	7	9	29.5	63	71	66	205	1349	78.0
73343	57	9	6	1	25	41	76	65	84	261	1483	85.7
73249	57	14	7	2	11	33.5	74	72	64	208	1311	75.8
75741	60	9	10	2	17	37.5	85	72	82	251	1524	88.1
72648	78	6	13	4	23	46	60	53	70	243	1355	78.3
75100	59	4	17	6	28	54.5	80	94	99	291	1645	95.1
71640	68	12	13	14	15	53.5	80	77	92	174	1436	83.0
71359	49	13	10	4	19	45.5	96	96	94	283	1676	96.9
70746	43	11	7	5	26	49	83	79	96	263	1577	91.2
70988	60	12	9	5	27	52.5	85	85	88	225	1527	88.3
74332	61	10	14	10	30	63.5	87	92	96	258	1615	93.4
72422	83	13	14	16	34	77	90	86	94	284	1640	94.8
70247	64	11	10	8	18	47	85	81	70	233	1513	87.5
71436	58	8	14	11	23	56	87	88	94	283	1634	94.5
72754	62	15	16	4	31	65.5	96	96	99	260	1648	95.3
72234	60	7	13	5	21	46	83	90	93	243	1588	91.8
71811	60	10	8	3	21	42	75	80	96	270	1579	91.3
73662	77	12	14	9	29	63.5	81	66	70	232	1461	84.5
73907	63	10	11	2	15	37.5	81	79	93	246	1531	88.5
70641	66	13	12		26	51	91	67	77	211	1393	80.5
75523	60	8	8	4	13	32.5	80	63	66	196	1365	78.9
71680	75	17	14	15	31	77	94	79	96	278	1638	94.7
70525	56	4	7	9	14	34	86	78	80	271	1478	85.4
72571	77	9	16	6	23	54	74	85	77	238	1489	86.1
71737	60	7	14	4	14	38.5	84	85	95	263	1613	93.2
75354	58	9	10	3	26	48	84	56	78	263	1460	84.4
70865	48	18	11	4	25	57.5	93	76	83	254	1508	87.2
75300	55	7	10	7	29	53	83	80	92	284	1569	90.7
72921	46	9	7	11	28	55	89	91	98	282	1648	95.3
72306	57	5	8	5	20	38	74	50	61	204	1438	83.1
75829	57	12	11	2	18	43	86	80	81	255	1537	88.8
72809	60	16	14	5	37	72	94	95	100	278	1667	96.4
71901	60	6	6	6	21	38.5	57	62	59	207	1307	75.5
70153	51	8	16	1	26	50.5	97	92	97	274	1654	95.6
70751	57	15	10	7	18	50	91	74	92	232	1540	79.8
74395	77	14	14	16	30	73.5	88	79	91	284	1534	88.7
73554	60	6	10	6	28	50	88	90	86	280	1600	92.5
73551	72	11	10	7	26	54	82	81	97	273	1558	90.1
74338	71	17	19	6	34	75.5	99	98	100	300	1716	99.2
72494	64	8	13	3	16	39.5	73	62	70	211	1293	74.7
72082	54	11	10	5	31	57	96	94	93	285	1676	96.9
70861	65	6	11	2	23	41.5	81	87	91	284	1601	92.5
73210	88	20	18	4	35	76.5	96	96	98	297	1695	98.0

72380	63	8	7	4	17	36	69	61	58	188	1294	74.8
70507	67	11	11	7	18	46.5	58	75	78	237	1395	80.6
74970	69	5	8	4	16	32.5	61	58	59	184	1309	75.7
70125	60	8	10	9	27	54	93	86	97	275	1637	94.6
73396	64	8	9	6	18	40.5	63	72	72	242	1481	85.6