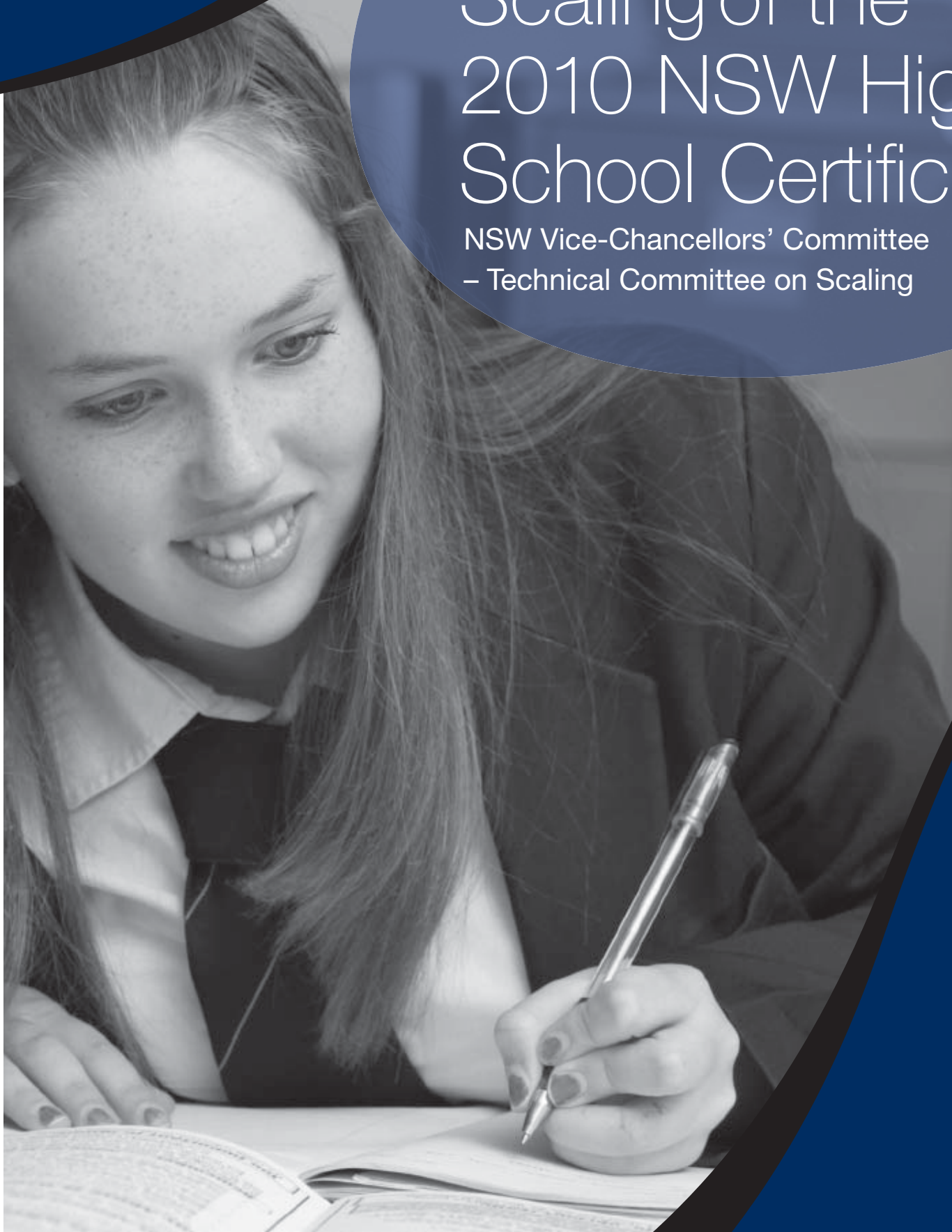


# Report on the Scaling of the 2010 NSW Higher School Certificate

NSW Vice-Chancellors' Committee  
– Technical Committee on Scaling



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## Preface

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In New South Wales student achievement in Stage 6 (Years 11 and 12) is reported in two ways: through the Higher School Certificate (HSC) Record of Achievement and through the Australian Tertiary Admission Rank (ATAR).

A student's Higher School Certificate Record of Achievement presents a profile of their achievement in the courses they have completed, both academic and vocational. Their achievement is reported in terms of the standards they have reached in the courses they have completed.

In contrast, the ATAR is a numerical measure of a student's overall academic achievement in the HSC in relation to that of other students. This measure allows the comparison of students who have completed different combinations of HSC courses and indicates the position of a student in relation to other students. The ATAR is calculated solely for use by universities, either on its own or in conjunction with other selection criteria, to rank and select school leavers for admission to university.

Calculation of the ATAR is the responsibility of the Technical Committee on Scaling on behalf of the NSW Vice-Chancellors' Committee. The NSW Board of Studies provides the HSC data from which the ATARs are calculated and the Universities Admissions Centre (UAC) advises individual students of their ATARs. Because of confidentiality provisions specified in Government legislation, ATARs cannot be provided to the Board of Studies, to schools or to other agencies.

This report contains information on the calculation of the ATAR in 2010.

**Professor Neville Weber**

Chair, Technical Committee on Scaling  
February 2011

## Acknowledgements

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Calculating individual ATARs each year and distributing them to the students who requested them is a major task. It requires a high degree of expertise, commitment and co-operation between the staff of several agencies during a period in the year when resources are stretched and time is very limited.

- Staff of the NSW Board of Studies who supply the HSC data from which the ATARs are calculated
- Staff of UAC who distribute the ATARs to individual students, handle enquiries from students following the release of the results, and distribute information about the ATAR to schools during the year
- Members of the Technical Committee on Scaling who play a central role with responsibility for translating policy decisions into processes, and for developing and maintaining programs that ensure the integrity of the data and the accuracy of the individual ATARs
- Those members of the Technical Committee on Scaling who work closely with the Chair of the Committee when the ATARs are calculated, and at other times during the year.

Without the skill and commitment of these people, the calculation and distribution of the ATARs would not be possible.

# Definitions

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## The Board

The Board refers to the NSW Board of Studies.

## UAC

UAC refers to the Universities Admissions Centre (NSW and ACT) Pty Ltd.

## ABS

The ABS is the Australian Bureau of Statistics.

## Board Developed courses

Board Developed courses are courses whose syllabuses have been developed by the NSW Board of Studies.

## Board Endorsed courses

Board Endorsed courses are courses whose syllabuses have been approved by the NSW Board of Studies but which do not have formal examinations conducted by the NSW Board of Studies.

## ATAR courses

ATAR courses are Board Developed courses for which there are examinations conducted by the NSW Board of Studies that yield graded assessments. VET courses for which there are no written examinations, Life Skills courses and Board Endorsed courses are not ATAR courses.

## HSC cohort

HSC cohort refers to those students who completed at least one ATAR course in a particular year.

## ATAR cohort

ATAR cohort refers to those students who received an ATAR in a particular year. The students may have accumulated courses over a five-year period.

## SC cohort

SC cohort refers to those students who completed the School Certificate Tests in a particular year.

## VET examination courses

The VET Curriculum Frameworks are based on training packages where the assessment is competency based. As competency-based assessment does not yield a mark that can be used in the ATAR calculations, the NSW Board of Studies introduced, for each VET Curriculum Framework, an additional course that includes an examination. If students wish to have a VET course contribute to their ATAR, they must enrol in the appropriate additional course and complete the examination. These additional courses are termed VET examination courses. Students who do not want their VET courses to contribute towards their ATARs are not required to complete these optional examinations.





# 1 The Higher School Certificate (HSC)

The HSC is an exit certificate awarded and issued by the NSW Board of Studies. It marks the completion of 13 years of schooling, is the gateway to further study and employment, and presents a profile of student achievement in a set of courses.

## 1.1 Eligibility for an HSC

To qualify for an HSC, students must complete a pattern of Preliminary and HSC courses containing at least 12 units of Preliminary courses and at least 10 units of HSC courses.

These HSC courses must include at least:

- six units of Board Developed courses
- two units of a Board Developed course in English
- three courses of two-unit value or greater (either Board Developed or Board Endorsed courses)
- four subjects.

Further details about HSC eligibility and HSC courses can be found in the *Assessment, Certification and Examination Manual*, and in the booklet *Rules and Procedures for Higher School Certificate Candidates*, which are published annually by the Board, and are available on the Board's website, [www.boardofstudies.nsw.edu.au](http://www.boardofstudies.nsw.edu.au)

## 1.2 Reporting student achievement in the HSC

For most ATAR courses, the Board reports student achievement against published standards by:

- an examination mark
- a school assessment
- an HSC mark
- a Performance Band.

These results are shown on a student's Record of Achievement. For most Board Developed courses, a Course Report is also provided which describes, using Performance Bands, the standard achieved in the course and provides a graph indicating the student's position in the course candidature.

### 1.2.1 Defining standards by Performance Bands

Standards in a course are described in terms of the content, skills, concepts and principles relevant to the course and represent the range of achievement expected of students completing the course. Performance Band descriptors, which describe typical achievement at different standards (Bands) have been developed for each course. There are six Performance Bands for 2 unit courses and four Performance Bands for Extension courses.

The percentage of students in any Performance Band depends only on how many students enrolled in that course perform at the standard specified by the Performance Band descriptor. There are no predetermined percentages of students to be placed in the Performance Bands.

It follows that, although the standards described by the Performance Bands in a course will be the same from year to year, **standards in different courses are not the same as they are based on different criteria**. Because of this it should not be expected that the percentages of students in the six Bands will be the same across courses. For any course the percentages may also vary from year to year if student performance changes.

The range of marks for the Bands are as follows:

### 2 unit courses

Band	1	2	3	4	5	6
Mark range	0-49	50-59	60-69	70-79	80-89	90-100

### Extension courses (except Mathematics Extension 2)

Band	E1	E2	E3	E4
Mark range	0-24	25-34	35-44	45-50

### Mathematics Extension 2\*

Band	E1	E2	E3	E4
Mark range	0-49	50-69	70-89	90-100

\* Mathematics Extension 2 students have their achievement for both Mathematics Extension 1 and Mathematics Extension 2 reported using four Bands but the mark range is out of 100 rather than 50.

### 1.2.2 Examination marks

The examination mark reported on a student's Record of Achievement indicates the standard a student has attained in that examination. If, for example, a student's performance in the Society and Culture examination is at the standard described for Band 3, the examination mark reported on their Record of Achievement for that course will lie between 60 and 69. **In general this mark, termed the aligned examination mark, will differ from the mark the student actually gained on the examination (the raw examination mark).**

What the aligned mark indicates is the standard reached by a student and their position in the Performance Band. For example, a mark of 62 means that, while the student has performed at a Performance Band 3 standard, their achievement is towards the bottom of this Band.

### 1.2.3 School assessments

To enable school assessments from different schools to be compared, marks submitted by schools (raw assessments) are first moderated using the raw examination marks gained by their students and then aligned to course standards. The school assessments reported on a student's Record of Achievement are the aligned assessments.

Although school assessments are moderated and then aligned against standards, a school's rank order of students in a course is maintained.

### 1.2.4 HSC marks

For each course, students receive three marks, an examination mark, a school assessment and an HSC mark, all of which have been aligned to the Board's published standards and rounded to whole numbers. **The HSC mark is the average of the examination mark and the school assessment.** It is the HSC mark that determines a student's Performance Band for the course.

Further details about the Board's processes can be found in Board Bulletins, in *The Media Guide 2010* and on the Board's website, [www.boardofstudies.nsw.edu.au](http://www.boardofstudies.nsw.edu.au)

## 2 The Australian Tertiary Admission Rank (ATAR) – an overview

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### 2.1 Background

The Australian Tertiary Admission Rank (ATAR) is a numerical measure of a student's overall academic achievement in the HSC in relation to that of other students. This measure allows the overall achievement of students who have completed different combinations of HSC courses to be compared. The ATAR is calculated solely for use by tertiary institutions, either on its own or in conjunction with other criteria, to rank and select school leavers for admission. Calculation of the ATAR is the responsibility of the Technical Committee on Scaling on behalf of the NSW Vice-Chancellors' Committee.

From 1998 to 2008 overall academic achievement by students in NSW and the ACT was reported via the Universities Admission Index (UAI). The ranking indices used in other states had different names. The Australasian Conference of Tertiary Admissions Centres (ACTAC) agreed to adopt a common name for the ranking index, the Australian Tertiary Admission Rank (ATAR), across all states and territories. The name change was to emphasise the common scale used for reporting student ranks. NSW and the ACT adopted the new name in 2009. All states, except Queensland, used the new name in 2010.

The ATAR, which aims to provide a fair and equitable method of ranking applicants from all states, is based on the assumption that the age cohorts from which the states' HSC cohorts are drawn are equally able to undertake tertiary study. That is, if everyone in the age group completed Year 12, it would be fair to consider as admissible to any particular university course the same proportion of each state's students.

The result of this procedure in New South Wales is a number which represents the position of a student in the appropriate age cohort, based on their overall academic achievement in the HSC.

Since 1998 New South Wales has used the School Certificate Tests as the link that enables the positions of HSC students relative to their Year 10 group to be estimated from their positions relative to their Year 12 group. With the move to the ATAR in 2009 the School Certificate group has been augmented to more accurately reflect the corresponding Year 7 cohort that is used in other states.

The ATAR is reported as a **number** between 0 and 99.95 with increments of 0.05. The ATAR is not a mark. Specifically, a student's ATAR indicates the position of that student relative to their Year 7 cohort. Students who receive an ATAR of 80.00 in 2010, for example, have performed well enough in the HSC to place them 20% from the top of their Year 7 cohort, if all the 2005 Year 7 students completed Year 12 and were eligible for an ATAR in 2010.

Students who indicate on their HSC entry forms that they wish to be notified of their ATARs will receive an ATAR Advice Notice from UAC. ATARs are also made available to institutions for selection purposes.

### 2.2 Categorisation of ATAR courses

ATAR courses are Board Developed courses assessed by formal examinations conducted by the Board. ATAR courses have sufficient academic rigour to be regarded as suitable preparation for university study.

ATAR courses are classified as either Category A or Category B courses. The criteria for Category A courses are academic rigour, depth of knowledge, the degree to which the course contributes to assumed knowledge for tertiary studies, and the coherence with other courses included in the ATAR calculations. Category B courses are those whose level of cognitive and performance demands are not regarded as satisfactory in themselves, but their contribution to a selection index is regarded as adequate if the other courses included in the aggregate are more academically demanding.

In 2010 Industrial Technology was based on a new syllabus and as a result changed its classification to Category A. Industrial Technology completed before 2010 is classified as a Category B course.

The Category B courses in 2010 were:

- Accounting <sup>1</sup>
- Automotive Examination
- Business Services Examination
- Construction Examination
- Electrotechnology Examination
- Entertainment Examination
- Hospitality Examination
- Information Technology Examination
- Metal and Engineering Examination
- Primary Industries Examination
- Retail Services Examination
- Tourism & Events Examination.

<sup>1</sup> A Board Developed course delivered by TAFE.

## 2.3 Eligibility for an ATAR in 2010

To be eligible for an ATAR a student must have satisfactorily completed at least 10 units of ATAR courses, which included at least:

- eight units of Category A courses
- two units of English
- three courses of two units or greater
- four subjects.

## 2.4 Calculation of the ATAR

The ATAR is based on an aggregate of scaled marks in 10 units of ATAR courses comprising:

- the best two units of English
- the best eight units from the remaining units, which can include up to two units of Category B courses.

Marks to be included in the ATAR calculations can be accumulated over a five-year period but if a course is repeated only the last satisfactory attempt is used in the calculation of the ATAR.

For students accumulating courses towards their HSC, scaled marks are calculated the year the courses are completed.

## 2.5 The ATAR Advice Notice

The ATAR Advice Notice includes:

- the student's ATAR
- a list of the ATAR courses which the student studied and the categorisation of each course
- the number of units of each ATAR course that were actually included in the calculation of the ATAR.

While ATARs are calculated for all ATAR-eligible students, only those students who indicate on their HSC entry forms that they wish to be notified of their ATAR will receive an ATAR Advice Notice from UAC.

There are two circumstances where an ATAR will not be shown on the ATAR Advice Notice. The first is when a student receives an ATAR between 0.00 and 30.00, in which case the ATAR will be indicated as "30 or less". The second is when the student has not met the requirements for an ATAR, in which case the statement "Not Eligible" will appear.

An example of an ATAR Advice Notice is given below.

<b>2010 Australian Tertiary Admission Rank Advice</b> <b>Your Australian Tertiary Admission Rank (ATAR): 74.30 *SEVEN*FOUR***THREE*ZERO</b>				
Course Name	Category	Year completed	Unit value	Units included in calculation of ATAR
Business Studies	A	2010	2	1
English Standard	A	2010	2	2
Mathematics	A	2010	2	2
Studies of Religion I	A	2010	1	0
French Continuers	A	2010	2	2
French Extension	A	2010	1	1
Hospitality Examination	B	2010	2	2

## 3 Calculating the ATAR in 2010

### 3.1 Overview

Tertiary institutions are concerned with ranking school leaver applicants. From their perspective, the importance of HSC marks is that they convey information about a student's position in relation to other students.

With the exception of English, which is compulsory, HSC students are free to choose their courses of study. Consequently, individual course candidatures vary in size and nature, and there are many different enrolment patterns. In 2010 there were 27 902 different enrolment patterns for ATAR-eligible students; only 176 of these 27 902 combinations were completed by 20 or more students and 20 330 were taken by only one student. Given the choice available, it follows that a student's rank in different courses will not necessarily have the same meaning, as good rankings are more difficult to obtain when the student is competing against students of high academic ability.

Because of the lack of comparability of HSC marks achieved in different courses, either when reported against standards or in terms of ranking, marks of individual students are scaled before they are added to give the aggregates from which the ATAR is determined.

The scaling process is designed to encourage students to take the courses for which they are best suited and which best prepare them for their future studies. The underlying principle is that a student should neither be advantaged nor disadvantaged by choosing one HSC course over another. The scaling algorithm estimates what students' marks would have been if all courses had been studied by all students.

The scaling model assumes that a student's position in a course depends on the student's developed ability in that course and the "strength of the competition". Since the ATAR is a rank that reflects academic achievement, "strength of the competition" is defined in terms of the demonstrated overall academic attainment of a course candidature.

Scaling first modifies the mean, the standard deviation and the maximum mark in each course. Adjustments are then made to the marks of individual students to produce scaled marks, which are the marks the students would have received if all courses had the same candidature.

Although scaled marks are generally different from the raw marks from which they are derived, the ranking of students within a course is not changed.

Once the raw marks have been scaled, aggregates are calculated for ATAR-eligible students. Percentiles, which indicate the ranking of students with respect to other ATAR-eligible students, are then determined on the basis of these aggregates. In most cases, the ranking or order of merit based on these aggregates is quite different from the order of merit using aggregates based on HSC marks.

The penultimate step is to determine what the percentiles would have been if all students in their Year 7 cohort completed Year 12 and were eligible for an ATAR five years later. The last step is to truncate these percentiles to the nearest 0.05. These are the ATARs.

Each ATAR corresponds to a range of aggregates and the number of students with each ATAR varies, depending in part on how many candidates tie on the same aggregate.

The scaling process, which does not assume that one course is intrinsically more difficult than another or that the quality of the course candidature is always the same, is carried out afresh each year.

All students who complete at least one ATAR course in a given year are included in the scaling process for that year. Students who are accumulating courses towards their HSC have their scaled marks calculated in the year the courses are completed.

## 3.2 The scaling process in 2010

### 3.2.1 Marks used in the ATAR calculations

For each course a student completes, the Board provides the following marks:

- a raw examination mark
- a raw moderated school assessment <sup>1</sup>
- an examination mark, which has been aligned to course standards
- a school assessment, which has been aligned to course standards
- an HSC mark.

<sup>1</sup> These are school assessments that have been moderated using the raw examination marks.

All marks are provided on a one-unit basis to one decimal place. In the description of the scaling process that follows, to cater for both 2 unit and Extension courses, marks are described on a one-unit basis.

### 3.2.2 Raw HSC marks

Raw HSC marks, rather than the Board's reported HSC marks, are used in the scaling process.

**A student's raw HSC mark in a course is the average of their raw examination mark and their raw moderated school assessment.** These marks are not reported to students.

### 3.2.3 Combined courses

As the Board places English Standard and English Advanced raw marks on a common scale, these courses are combined and scaled as a single course, but are reported as separate courses in order to be consistent with the Board's reporting practice.

### 3.2.4 Initial standardisation

Before the scaling algorithm is implemented, a linear transformation is applied to the raw HSC marks in each course to set the top mark to a common value. The marks in each course are then standardised to a mean of 25 and standard deviation of 12 on a one-unit basis.

### 3.2.5 Calculating scaled means and standard deviations

The model underpinning the scaling algorithm specifies that the scaled mean in a course is equal to the average academic achievement of the course candidature where, for individual students, the measure of academic achievement is taken as the average scaled mark in all courses completed. The model specification leads to a set of simultaneous equations from which the scaled means of 2 unit courses are calculated.

The scaled standard deviation for a 2 unit course is the standard deviation of the measure of overall academic achievement of the candidature of that course.

For Extension courses the scaled means and standard deviations are determined by the performance of the Extension students on the corresponding 2 unit courses. The exceptions are History Extension, which can be completed by both Modern History and Ancient History students, and the second Extension courses in English and Mathematics: English Extension 2 and Mathematics Extension 2.

A scaled mean is determined for the Modern History students in History Extension on the basis of their performance in the 2 unit Modern History course. A scaled mean for the Ancient History students in History Extension is found in a similar manner. The scaled mean for History Extension is then set equal to the weighted average of these two scaled means. The scaled standard deviation is found in a similar manner.

Scaled means and standard deviations for English and Mathematics Extension 1 courses are calculated as described above. The scaled mean and standard deviation for the Mathematics Extension 2 course are then determined by the performance of the Extension 2 students in the Mathematics Extension 1 course. For English Extension 2, the scaled mean and standard deviation are determined by the performance of the Extension 2 students in English Advanced. (This option is not available for Mathematics as the Extension 2 students do not complete the Mathematics 2 unit paper.)

### 3.2.6 Setting maximum marks

The maximum possible scaled mark in a course is determined according to the academic quality of the course candidature in such a way that the maximum possible scaled mark for the combined 2 unit English candidature is 50 on a one-unit basis.

In 2010 the maximum possible scaled mark in a course was given by the smaller of 50 and the scaled mean + 2.48 times the maximum of the initial scaled standard deviation and 6, where the scaled mean and initial scaled standard deviation of the course are determined using the scaling algorithm.

The number, 2.48, was determined on the basis that the maximum possible scaled mark in the combined 2 unit English course is 50. This number is calculated afresh each year.

### 3.2.7 Scaling individual marks

Once the scaled means and standard deviations are determined, individual raw marks are scaled using a non-linear transformation which preserves the scaled mean and standard deviation of a course and restricts the scaled marks to the range (0–50).

If the actual maximum scaled mark in a course is less than the maximum possible scaled mark a further linear transformation is applied. The effect of this linear transformation is that, while the scaled mean for a course is not changed, the standard deviation is increased when the actual maximum scaled mark in the course is changed to be the same as the maximum possible scaled mark. In all tables presented in this report the modified scaled standard deviations rather than the initial scaled standard deviations are shown.

For some courses with very small candidatures the non-linear transformation is not always appropriate, in which case alternative transformations, which are consistent with the principles of the scaling algorithm, are used.

### 3.2.8 Calculating aggregates and ATAR-eligible percentiles

Aggregates of scaled marks are calculated to one decimal place according to the rules described in section 2.4. ATAR-eligible percentiles, which show the position of students relative to their ATAR cohort, are then determined for these aggregates. The ATAR-eligible percentile corresponding to a particular aggregate is the percentage of the ATAR cohort who received an aggregate mark less than or equal to that aggregate.

Table 3.1 shows the ATAR-eligible percentiles corresponding to selected aggregates for the 2010 ATAR cohort. From the table it can be seen that, for example, 77% of the 2010 ATAR cohort received an aggregate mark of 350 or less.

**Table 3.1 ATAR-eligible percentiles corresponding to selected aggregates: 2010**

Aggregate	ATAR-eligible percentile
450.0	98.8
400.0	90.8
350.0	77.0
300.0	59.8
250.0	42.1
200.0	26.3
150.0	13.1



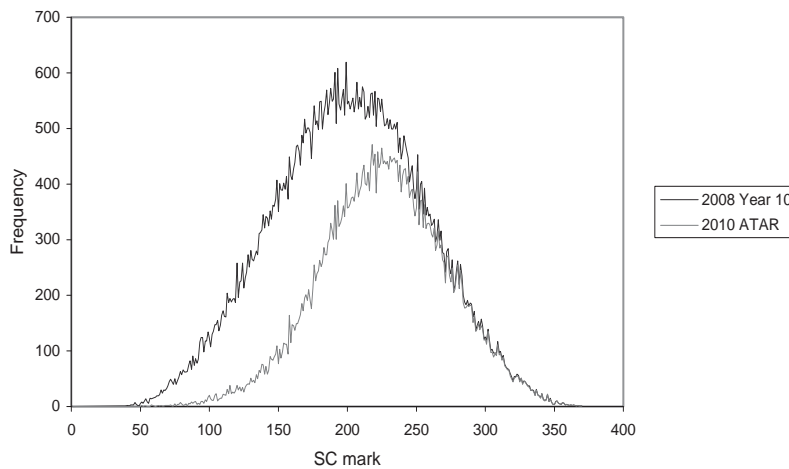
### 3.2.9 Calculating the ATAR – establishing the link

The percentiles that have been calculated show students' positions relative to their 2010 ATAR cohort. The next step is to relate the ATAR-eligible cohort to the 2008 School Certificate (SC) cohort. An observed score equating procedure is employed using the SC test results to produce the anchor variable.

A total SC mark is first calculated for each student. In 2008 the composite SC mark for each student was based on the student's results in the SC Tests in English-literacy, Mathematics, Science, and Australian History, Geography Civics and Citizenship. The maximum possible SC mark was 400. Of the 54 221 students in the 2010 ATAR cohort, 49 161 had completed the SC Tests in 2008; 60.9% of the 80 707 students in the 2008 SC cohort.

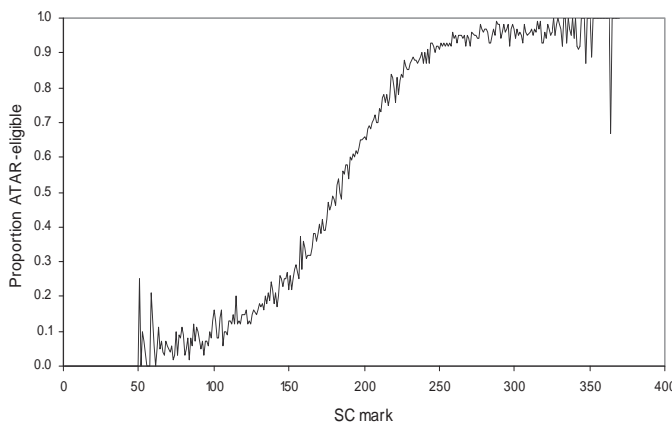
The next step is to calculate frequency distributions of the SC mark for all 2008 Year 10 students and for those who were eligible for an ATAR in 2010. The differences in the two frequency distributions (Figure 3.1) show that the 2008 Year 10 students who were eligible for an ATAR in 2010 were generally academically more able than the total 2008 SC cohort.

**Figure 3.1 Frequency distributions of SC marks for the 2008 Year 10 cohort and for students who were also in the 2010 ATAR cohort**



Another way of presenting the data is to calculate the proportion of students on each SC mark in 2008 who subsequently gained an ATAR in 2010 and plot the proportions against corresponding SC marks. The resultant graph (Figure 3.2) shows that the likelihood of 2008 Year 10 students continuing with their schooling and being eligible for an ATAR in 2010 increases with SC mark.

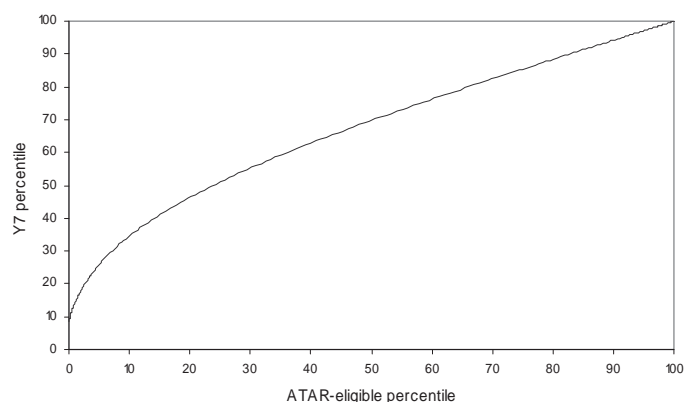
**Figure 3.2 Proportion of the 2008 Year 10 cohort also in the 2010 ATAR cohort by SC mark**



The data underlying Figure 3.1 are then used to link a student's position relative to their 2010 ATAR cohort, their ATAR-eligible percentile, with their position relative to their 2005 Year 7 cohort, their Y7 percentile (Figure 3.3). This is done by augmenting the 2008 SC cohort with 7 459 fictitious students allocated an SC mark of 1. The extra 7 459 students bring the size of the cohort into agreement with

the size of the 2005 Year 7 population as reported by the ABS. The early-leavers are incorporated into the process by assuming that, had they completed the School Certificate, their performance would be lower than the performance of the corresponding SC cohort. This is a simplistic assumption which cannot be fully tested.

**Figure 3.3 Plot showing relationship between ATAR-eligible and Y7 percentiles**



This link is determined by calculating, for each SC mark:

- the percentage of the Y7 cohort who have an SC mark less than or equal to the given SC mark (Y7 percentile), and
- the percentage of those who were also in the 2010 ATAR cohort who had an SC mark less than or equal to the given SC mark (ATAR-eligible percentile).

The relationship between the two sets of percentages is shown in Table 3.2 for a selected set of ATAR-eligible percentiles. In this table, the percentiles have been rounded to one decimal place but for the actual calculations they are not rounded.

**Table 3.2 Relationship between ATAR-eligible percentiles and Y7 percentiles**

ATAR-eligible percentile	Y7 percentile
99.0	99.4
90.0	94.2
80.0	88.3
70.0	82.4
60.0	76.2
50.0	69.8
40.0	62.9
30.0	55.2
20.0	46.3
15.0	41.0

These equivalences show, for example, that students who were better than 90.0% of the 2010 ATAR-eligible cohort would have been better than 94.2% of the 2005 Year 7 cohort.

### 3.2.10 Calculating the ATAR – the final step

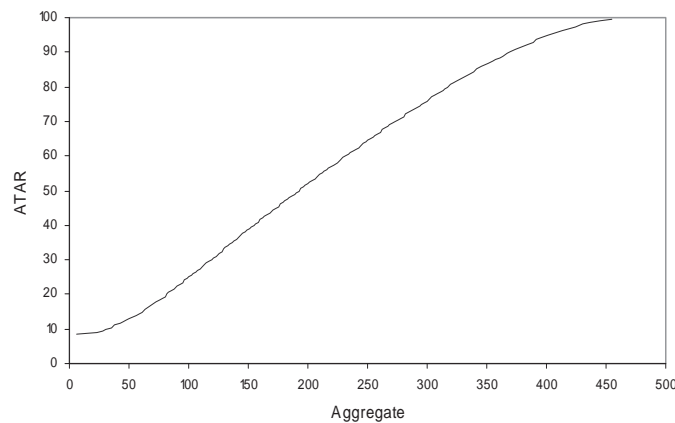
The last step is to determine the relationship between aggregate and Y7 percentile. This is done by converting the ATAR-eligible percentiles found in section 3.2.8 to Y7 percentiles using the equivalences from section 3.2.9. When truncated to the nearest 0.05, these Y7 percentiles become the ATARs.

The relationship between aggregate and ATAR is shown graphically in Figure 3.4 and, for selected aggregates, in Table 3.3.

**Table 3.3 Relationship between aggregate and ATAR**

Aggregate	ATAR
450.0	99.25
400.0	94.65
350.0	86.55
300.0	76.05
250.0	64.40
200.0	52.05
150.0	38.80

**Figure 3.4 Relationship between aggregate and ATAR**



The following example uses data from Tables 3.1 and 3.2 to illustrate the procedure. In the actual ATAR calculations the full data set is used, not just the data presented in these tables. The ATAR estimated from data presented in these tables will only be an estimate of the actual ATAR which is calculated using the full data set.

Table 3.1 shows that students with an aggregate of 300.0 performed well enough in the HSC to be 40.2% from the top of the 2010 ATAR cohort; a percentile of 59.8. From Table 3.2 we can estimate by linear interpolation that students who are at the 59.8<sup>th</sup> percentile of the ATAR-eligible cohort are at the 76.07<sup>th</sup> percentile of the 2005 Year 7 cohort. This means that students with an aggregate of 300.0 have performed well enough in the HSC to be at the 76.07<sup>th</sup> percentile of their Year 7 cohort. Their percentile is truncated, giving an estimated ATAR of 76.05.

## 4 The HSC and ATAR in 2010 – some results

### 4.1 Overview

In 2010 a total of 70 138 students completed at least one HSC course, but 1 602 were removed from the database as they completed no ATAR course in 2010. Of the remaining pool of 68 536 students 93.1% received an HSC and 79.1% received an ATAR. Only 24 students who received an ATAR were not eligible for the HSC. While courses contributing to the underlying aggregate may be accumulated over a five-year period, 96.4% of those receiving an ATAR in 2010 included only 2010 courses in their aggregate.

The percentage of students enrolled in at least one ATAR course who were female (51.6%) was lower than that of previous years, as was the percentage of students receiving an ATAR who were female (52.8%).

### 4.2 Percentage of students receiving an ATAR

HSC students who do not receive an ATAR fall into one of two broad groups:

1. Those who are studying less than 10 units. These include private study students who enrol in one or two courses, mature-age students who are studying a limited HSC program and students who are accumulating their HSC over two or more years.
2. Those who enrol in a full HSC program which does not satisfy the requirements for an ATAR. These students normally complete six or eight units of Board Developed courses, and choose the remaining units from Board Endorsed courses. They receive an HSC but not an ATAR. In 2010 there were 9 632 such students.

**Table 4.1 Percentage of students receiving an ATAR/UAI: 2001–2010**

Year	HSC candidature	Students receiving an ATAR/UAI	
		Number	%
2001	60 788	49 782	81.9
2002	63 120	51 648	81.8
2003	63 387	51 736	81.6
2004	64 267	51 999	80.9
2005	63 867	51 461	80.6
2006	64 274	50 744	78.9
2007	65 005	51 036	78.5
2008	65 757	51 978	79.0
2009	66 612	52 402	78.7
2010	68 536	54 221	79.1

### 4.3 Number of units of ATAR courses completed

The pattern in 2010 was similar to that observed in 2009, with 44.3% completing exactly 10 ATAR units and 35.4% completing more than the required minimum number of ATAR units (Table 4.2).

**Table 4.2 Percentage of students completing specified numbers of units<sup>1</sup> of ATAR courses: 2007–2010**

Number of units	2007 %	2008 %	2009 %	2010	
				%	Number
1	0.05	0.1	0.2	0.2	112
2	3.4	3.3	3.7	4.1	2 781
3	0.3	0.3	0.3	0.4	255
4	3.0	2.9	3.2	3.4	2 324
5	0.2	0.1	0.1	0.1	97
6	6.0	5.8	5.9	5.7	3 907
7	0.2	0.2	0.2	0.2	132
8	6.8	6.7	6.3	5.9	4 067
9	0.5	0.4	0.4	0.4	252
10	41.5	42.9	43.2	44.3	30 359
11	20.1	19.6	19.2	18.8	12 854
12	15.2	15.0	14.9	14.3	9 810
13	2.2	2.1	1.9	1.8	1 267
14	0.4	0.4	0.3	0.4	255
15+	0.1	0.1	0.1	0.1	64
HSC cohort	65 005	65 757	66 612		68 536

<sup>1</sup> The units include current year units and units accumulated in previous years.

#### 4.4 Course enrolments – Table A1

Table A1 provides, for each course, the size of the candidature, the number who received an HSC in 2010, the number who received an ATAR in 2010, the percentage of females and the maximum ATAR gained by a student enrolled in that course. The table includes students who completed the course in 2010 as well as those who completed the course in previous years and completed at least one ATAR course in 2010. The table excludes courses where there were less than 10 students.

What is clear is that in almost all courses some students gained an ATAR in excess of 95.00, and for the majority of courses the maximum ATAR is higher.

The pattern of “male-dominated” and “female dominated” courses was similar to the pattern exhibited previously. Female students were in the majority in languages, creative arts and the humanities, while males were in the majority in technology and computing courses.

A total of 17 481 students enrolled in at least one VET course, of which 12 956 students enrolled in a VET examination course. These figures are similar to the corresponding numbers for 2009 (17 344 and 12 919 respectively).

Overall, 79.1% of the 2010 HSC cohort received ATARs but the percentage varied across courses, from 56.2% to 100% for Category A courses with candidatures exceeding 100. For students enrolled in any VET courses the overall figure was 58.5% but was higher, 77.9%, for students enrolled in VET examination courses.

#### 4.5 Distributions of HSC marks – Table A2

Table A2 in the Appendix shows the distributions of HSC marks in 2010. For each course the percentage of students in Bands 2 to 6 are given, together with the median HSC mark and the Band in which the median lies. Data are not provided for courses with less than 10 students.

Since the introduction of standards referenced reporting in 2001, marks reported to students have not been constrained to a set distribution. Students demonstrating the highest level of achievement in a 2 unit course are placed in Band 6 and receive HSC marks of 90 and above. The data show clearly that patterns of HSC marks vary across courses.

There are few students in Band 1. For most 2 unit courses the median lies in Band 4.

Comparison of Table A2 with the corresponding table in 2009 shows that the distribution of HSC marks has changed for some courses. This is not surprising, and will be discussed in section 5.1.

## 4.6 Descriptive statistics of HSC and scaled marks – Table A3

Table A3 in the Appendix presents, for each course, descriptive statistics and the 99<sup>th</sup>, 90<sup>th</sup>, 75<sup>th</sup>, 50<sup>th</sup> and 25<sup>th</sup> percentiles for HSC and scaled marks. Data are not provided for courses with less than 10 students. Percentiles are not included for courses with less than 40 students.

Although HSC marks are not used as the basis for scaling they are shown in Table A3, because raw marks are not released to students or teachers and hence cannot be presented in this report. Scaled marks are generally lower than HSC marks: few students receive HSC marks less than 25 (on a one-unit basis), whereas the average scaled mark for the total HSC candidature is approximately 25.

In the table, marks are shown on a one-unit basis, so the range is 0 to 50. The percentiles in a course are based on all students completing that course in 2010 irrespective of whether they were eligible for an ATAR or not.

When reading the table it must be remembered that an HSC mark indicates a standard reached whereas a scaled mark indicates a student's position in the course candidature if all students had completed that course. Because HSC marks and scaled marks serve different purposes, comparing HSC and scaled marks is of little value, and can lead to misinterpretations that may affect student choices of courses to study.

**Table A3 should not be used as a simple HSC to scaled mark conversion table** for reasons explained below.

The Board reports HSC marks rounded to the nearest integer whereas raw marks are calculated to one decimal place. The Board aligns the raw marks to bands that best describe the standards that the students achieve. This can compress a range of raw marks to a smaller number of HSC marks. For example, all Band E4 performances in an Extension course (except for Mathematics Extension 2) are allocated one of the six integer grades 45.0 to 50.0. Thus after aligning and rounding, for each HSC mark there can be a range of raw marks and hence a range of scaled marks. There is, in general, no unique scaled mark for an HSC mark.

A given HSC mark often corresponds to a range of raw and scaled marks and hence to a range of percentiles. Table A3 gives the HSC mark at the specified percentile. Not all students with that HSC mark will be at that percentile when the raw marks are considered. For example, in Latin Extension the HSC mark at the 75<sup>th</sup> percentile was 48.0. Students with a Latin Extension HSC mark of 48.0 in fact corresponded to the scaled mark percentile range 56.7 to 78.4.

The scaled marks reported in Table A3 are the scaled marks at the specified percentiles. The 75<sup>th</sup> percentile of the scaled mark distribution in Latin Extension was 45.9 but there was a range of scaled marks achieved by those with an HSC mark of 48.0.

Looking at English Extension 2 in Table A3 we see that the maximum mark and the 99<sup>th</sup> percentile of the HSC distribution are both 50.0 whereas the scaled marks at the corresponding percentiles are 50.0 and 48.5. This illustrates that there is not a unique scaled mark corresponding to a given HSC mark.

The primary purpose of Table A3 is to show the relativities between courses.

For example, Table 4.3 shows the scaled marks corresponding to the 75<sup>th</sup> and 90<sup>th</sup> percentiles for Geography, Legal Studies and Music 2.

**Table 4.3 Scaled marks for selected percentiles**

Course	Scaled mean	Scaled mark for	
		P <sub>90</sub>	P <sub>75</sub>
Geography	25.5	38.8	33.2
Legal Studies	25.3	39.7	33.9
Music 2	33.4	43.1	39.7

Geography and Legal Studies have similar scaled means and similar scaled marks corresponding to the 75<sup>th</sup> and 90<sup>th</sup> percentiles. Music 2 has a higher scaled mean and higher scaled marks at the two percentiles. The table also shows that Legal Studies students in the top 10% of the candidature have scaled marks comparable to those obtained by students in the top 25% of the Music 2 candidature.

#### 4.7 Distribution of ATARs – Table A7

Table A7 in the Appendix shows the distribution of ATARs. ATARs are **not** evenly distributed. For most ATARs the number of students on that ATAR lies between 20 and 50. The number of students on an ATAR is less for lower ATARs.

An ATAR of 99.00 does **not** represent the top 1% of the ATAR cohort; 1.7% of the 2010 ATAR cohort actually gained an ATAR of 99.00 or above. It does, however, represent the level of achievement necessary to be in the top 1% of the 2005 Year 7 cohort if all those students had continued to Year 12 and been eligible for an ATAR in 2010.

**The median ATAR in 2010 was 69.80**, down from 70.25 in 2009. In 2010 17.2% of the ATAR-eligible students received an ATAR of 90.00 or above and 33.9% gained an ATAR of 80.00 and above.

**Table 4.4 Percentage of ATAR students receiving specific ATARs and above: 2009–2010**

ATAR	2009 %	2010 %
99.00	1.8	1.7
95.00	8.9	8.6
90.00	17.6	17.2
80.00	34.6	33.9
70.00	50.4	49.7
60.00	64.4	64.0
50.00	76.4	76.1

In 2010, 49 students received a top ATAR of 99.95, 31 males and 18 females, from a mix of government and independent schools.

#### 4.8 Gender differences

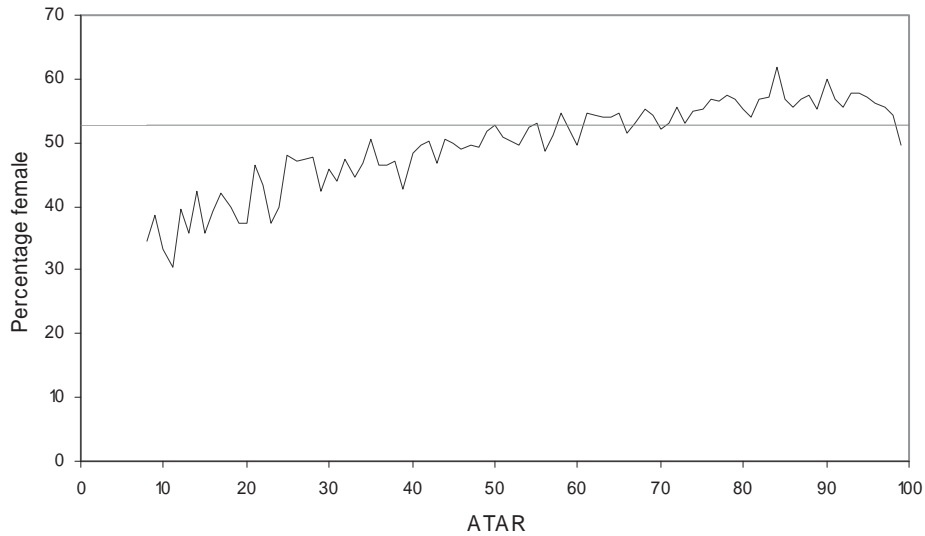
As in previous years, female students outperformed male students in the majority of courses and had a higher average ATAR. The percentages of students receiving ATARs on or above specified values who were female are given in Table 4.5.

**Table 4.5 Percentage of students receiving ATARs on or above specified values who were female: 2009–2010**

ATAR	2009 % female	2010 % female
99.00	50.2	49.7
98.00	50.4	51.9
95.00	54.2	54.5
90.00	55.9	56.0
80.00	57.1	56.4
70.00	56.7	56.0
60.00	55.9	55.5
50.00	55.3	54.8
40.00	54.6	54.2
30.00	54.2	53.6
<b>Total cohort</b>	<b>53.5</b>	<b>52.8</b>

Figure 4.1 shows the percentage of students on each ATAR who were female. For this graph the ATARs have been truncated, so that an ATAR of 90, for example, includes ATARs from 90.00 to 90.95. Overall 52.8% of the ATAR cohort was female, which is represented by the horizontal line on the graph. The graph shows clearly that there were proportionally more females on ATARs above 70.00 than males.

**Figure 4.1 Percentage of students on each ATAR who were female**



## 4.9 University offers

UAC makes several rounds of offers: first the October, November, December and Early January rounds, then the Main Round, which is followed by the Early February and Final rounds. In this report *offer* refers to offers made in any of the rounds.

Of the 54 221 students who received an ATAR in 2010, 76.8% applied through UAC for a university course. Of the domestic (local) applicants 86.2% were made at least one offer of a place. Table 4.6 and 4.7 provide a breakdown of applicants and offers by ATAR band.

**Table 4.6 Applicants for university places by ATAR – domestic and international**

ATAR band	Total number of students	Applicants	
		Number	Percentage <sup>1</sup>
90.00 – 99.95	9 328	9 191	98.5
80.00 – 89.95	9 055	8 622	95.2
70.00 – 79.95	8 570	7 733	90.2
60.00 – 69.95	7 740	6 250	80.7
50.00 – 59.95	6 577	4 524	68.8
Below 50.00	12 951	5 343	41.3
<b>Total</b>	<b>54 221</b>	<b>41 663</b>	<b>76.8</b>

<sup>1</sup> These are percentages of the number of students in the given ATAR band.



**Table 4.7 Offers of university places by ATAR – domestic only**

ATAR band	Total number of applicants	Offers	
		Number	Percentage <sup>2</sup>
90.00 – 99.95	8 868	8 859	99.9
80.00 – 89.95	8 329	8 312	99.8
70.00 – 79.95	7 507	7 362	98.1
60.00 – 69.95	6 070	5 676	93.5
50.00 – 59.95	4 373	3 168	72.4
Below 50.00	5 006	1 232	24.6
<b>Total</b>	<b>40 153</b>	<b>34 609</b>	<b>86.2</b>

<sup>2</sup> These are percentages of the number of applicants in the given ATAR band.

Not all applicants have been made an offer solely on the basis of their ATARs. For some programs alternative criteria have been used, while for other programs students' ATARs have been supplemented by additional criteria.

Table 4.7 shows an obvious relationship between the ATAR and the probability of an offer.

## 5 Trends and other issues

### 5.1 Variation in patterns of HSC marks – Tables A4, A5

A concern frequently raised by parents and students is that the observed variation in the patterns of HSC marks across different courses affects scaling and hence the ATAR calculation. HSC marks that the Board uses to report student achievement are not used in the scaling process so any variation in the distribution of these marks does not affect the ATAR calculation at all.

A related question is whether changes in the pattern of HSC marks from one year to the next affects the pattern of scaled marks and hence the pattern of ATARs. For the reason given above, the answer is also *no*. It is to be expected that the patterns of HSC marks may change from year to year, reflecting differences in student achievement (against the published standards) in individual courses. In contrast, one would expect to see differences in the patterns of scaled marks only if the overall academic quality of a course candidature changed.

Tables A4 and A5 in the Appendix show the distributions of HSC and scaled marks, respectively, in 2010 and 2009. The marks are on a per-unit basis (0-50) and courses with less than 40 students in either year are not included. Table A4 shows the percentages of each course candidature with an HSC mark less than 45, 40, 35, 30 and 25 for 2010 and 2009. Table A5 provides similar information for scaled marks. The data show clearly that while the distributions of HSC marks have changed for some courses, the distributions of scaled marks were generally the same.

Society & Culture is an example of a course where there was virtually no change in candidature from 2009 but there is a change in the distribution of HSC marks (Table 5.1). The distributions of scaled marks in the two years were, however, similar.

**Table 5.1 Distributions of HSC and scaled marks for Society & Culture: 2009 and 2010, on a one-unit basis**

Mark	Year	Enrolment	Percentage of students with mark less than:				
			45	40	35	30	25
HSC mark	2010	3 961	91.5	66.5	34.9	10.3	1.7
	2009	3 925	93.1	58.4	28.5	9.3	1.4
Scaled mark	2010	3 961	98.8	93.3	83.5	71.0	55.5
	2009	3 925	98.5	93.6	84.5	70.4	53.6

Taken together, the data indicate that the 2010 candidature in Society & Culture performed worse than the corresponding cohort in 2009 in terms of Society & Culture, except at the very top. However their overall performance as judged by their scaled marks is very similar.

## 5.2 Distributions of English and Mathematics marks: 2007–2010

Because all students study English, and most study Mathematics, comparative data is shown for English and Mathematics courses for the four years, 2007 to 2010. Table 5.2 shows the changes in the distributions of HSC marks and Table 5.3 shows the changes in the distributions of scaled marks.

**Table 5.2 Distributions of HSC marks for English and Mathematics courses: 2007–2010**

	Year	Enrolment	Percentage of students with HSC mark less than:				
			45	40	35	30	25
English Standard	2010	34 371	99.8	95.7	64.9	27.8	8.3
	2009	32 454	99.8	94.6	63.8	22.5	7.2
	2008	32 191	99.8	94.0	61.9	20.6	5.8
	2007	31 015	99.9	96.6	61.2	22.0	5.7
English Advanced	2010	27 132	86.0	42.1	7.3	0.9	0.1
	2009	27 248	88.7	48.0	11.2	1.0	0.1
	2008	27 438	89.2	50.6	10.8	0.9	0.1
	2007	28 086	90.8	53.1	10.5	0.9	0.1
English Extension 1	2010	5 578	75.5	37.8	14.3	3.3	0.6
	2009	5 718	77.5	42.9	15.7	3.7	0.9
	2008	5 694	74.2	40.9	16.0	3.5	0.7
	2007	6 153	78.0	45.7	19.4	5.4	1.7
English Extension 2	2010	2 201	71.9	44.2	18.5	6.0	1.7
	2009	2 165	71.8	43.1	20.1	7.4	2.4
	2008	2 209	69.5	41.1	17.9	4.7	1.3
	2007	2 500	67.8	41.2	20.6	7.0	2.2
ESL	2010	3 079	96.3	74.3	35.0	10.4	2.6
	2009	3 248	97.3	78.2	43.8	14.4	2.9
	2008	2 837	96.7	71.8	40.1	14.1	4.2
	2007	2 603	98.0	72.3	36.0	11.8	4.6
General Mathematics	2010	30 992	93.4	73.7	43.0	14.0	2.8
	2009	29 909	94.1	75.1	45.4	18.4	6.6
	2008	29 977	95.2	74.1	43.7	17.2	6.1
	2007	29 437	95.9	77.4	40.5	15.8	3.5
Mathematics	2010	17 152	80.9	51.8	24.7	10.7	5.1
	2009	17 197	84.2	57.4	28.9	10.5	5.2
	2008	17 247	83.2	55.0	27.8	12.1	3.2
	2007	17 758	84.5	60.4	29.9	11.7	3.6
Mathematics Extension 1	2010	9 116	63.0	36.8	17.2	7.6	2.7
	2009	8 630	65.5	37.9	18.1	7.6	2.9
	2008	8 548	66.6	39.9	18.2	8.5	3.9
	2007	8 614	67.7	45.4	25.2	10.4	3.9
Mathematics Extension 2	2010	3 469	62.5	27.6	9.8	3.3	1.0
	2009	3 170	60.0	29.6	10.5	4.5	1.8
	2008	3 089	62.9	30.1	9.5	3.6	1.6
	2007	3 009	67.0	38.7	16.9	4.9	1.3

**Table 5.3 Distributions of scaled marks for English and Mathematics courses: 2007–2010**

	Year	Enrolment	Percentage of students with scaled mark less than:					
			45	40	35	30	25	20
English Standard	2010	34 371	99.9	99.7	98.4	94.0	83.4	64.4
	2009	32 454	99.9	99.6	97.7	92.3	80.1	61.1
	2008	32 191	99.9	99.5	97.7	91.9	80.1	61.0
	2007	31 015	99.9	99.6	97.9	93.2	82.8	63.7
English Advanced	2010	27 132	96.5	80.2	58.8	35.9	18.1	7.1
	2009	27 248	96.6	82.9	63.8	41.0	22.7	9.9
	2008	27 438	97.0	83.5	63.5	42.3	23.4	10.2
	2007	28 086	96.1	82.6	64.1	44.2	25.1	9.9
English Extension 1	2010	5 578	96.7	69.7	35.2	14.2	4.9	1.3
	2009	5 718	95.6	67.7	36.0	15.0	6.0	2.6
	2008	5 694	95.2	68.0	36.1	15.4	5.6	2.1
	2007	6 153	94.4	68.2	36.6	14.9	5.6	2.2
English Extension 2	2010	2 201	92.9	70.2	41.6	14.9	4.0	0.9
	2009	2 165	90.3	68.0	38.3	16.6	6.0	2.0
	2008	2 209	89.3	67.0	39.0	16.5	5.7	1.7
	2007	2 500	89.9	66.0	37.3	16.9	6.0	2.0
ESL	2010	3 079	98.5	93.2	84.9	73.5	58.8	44.5
	2009	3 248	99.4	95.0	86.4	76.0	61.9	48.3
	2008	2 837	98.6	93.2	85.0	73.3	59.4	45.7
	2007	2 603	98.9	94.7	86.1	74.3	60.8	47.2
General Mathematics	2010	30 992	99.9	98.3	90.0	77.6	63.0	47.4
	2009	29 909	99.9	98.0	90.3	77.8	63.0	47.2
	2008	29 977	99.9	98.1	90.3	77.9	62.5	46.4
	2007	29 437	99.9	98.7	91.3	78.7	63.9	47.0
Mathematics	2010	17 152	97.3	82.6	62.9	42.2	25.4	14.3
	2009	17 197	96.5	83.2	64.6	44.7	27.3	14.9
	2008	17 247	95.9	82.0	64.4	45.7	28.0	15.3
	2007	17 758	97.6	84.2	64.1	43.6	26.4	14.6
Mathematics Extension 1	2010	9 116	76.9	41.9	19.3	9.3	4.2	1.8
	2009	8 630	70.6	37.7	19.3	10.1	5.2	2.7
	2008	8 548	74.1	41.0	18.8	9.2	4.4	2.1
	2007	8 614	76.6	43.1	20.5	9.4	4.4	1.9
Mathematics Extension 2	2010	3 469	52.6	14.1	4.6	1.8	0.7	0.4
	2009	3 170	39.3	10.7	4.2	1.7	0.5	0.2
	2008	3 089	43.4	11.5	3.6	1.7	0.7	0.3
	2007	3 009	53.8	16.2	4.2	1.4	0.7	0.3

### 5.3 Courses that contribute to the ATAR – Table A6

There are three related questions regarding which courses contribute towards the ATAR.

- “Which courses will contribute to my ATAR?” which is normally asked in either Year 10 or Year 11 when students are choosing courses to study.
- “Why has this course contributed towards my ATAR rather than this other course?” which is asked when students receive their ATAR Advice Notices.
- “Do some groups of courses contribute to the ATAR less often than other groups of courses?”

The first two questions are addressed in the next chapter of this report and in the *All About Your ATAR* booklet which is distributed to HSC students in December of each year and is available to download from UAC’s website at [www.uac.edu.au](http://www.uac.edu.au)

The third question, whether some courses or groups of courses contribute towards the ATAR less often than other courses, is usually asked by teachers. This is not an easy question to answer, because not all students complete the same number of units. If students complete only 10 units all courses *must* be counted, whereas if students complete more than 10 units at least one unit *will* be omitted.

Table A6 in the Appendix provides some information about students who completed *more than 10 units*. Data are not provided for courses with less than 10 students. For each course:

- the first column shows the total number of students who received an ATAR in 2010
- the second column shows the number of students who completed more than 10 units
- the third column expresses this number as a percentage
- the final column gives the percentage of students who counted *all* units of that course towards their ATAR. The percentage is based on the number of students in the course who had completed more than 10 units of ATAR courses.

Of the 105 courses listed in Table A6, 69 have 70% or more of their students counting the course. The data also show that, while there are differences in the percentages of students who count a particular course towards their ATARs, there is no evidence of systematic differences across Key Learning Areas.

A further analysis has been completed of students who completed only 10 units of ATAR courses. For these students all their courses must contribute towards their ATAR so for each course, the percentage of students for whom the scaled mark in that course was their best scaled mark was calculated. The proportions of students for whom their scaled mark in that course was their second best, third best, fourth best and fifth best scaled mark were also calculated. The patterns of percentages were compared across individual courses and groups of courses, and while there were differences between individual courses there was no evidence of systematic differences across Key Learning Areas.

### 5.4 Relationship between ATAR, percentiles and aggregates – Tables A8, A9

A further question that is frequently raised concerns the relationship between the ATAR and the aggregate of scaled marks from which it is derived.

Table A8 in the Appendix shows the ATAR corresponding to selected ATAR-eligible percentiles. For example, in 2010 5% of the ATAR cohort received an ATAR of 97.10 or above.

Each ATAR corresponds to a range of aggregates and the figures provided in Table A9 in the Appendix show the minimum aggregate corresponding to selected ATARs.

## 6 Frequently asked questions

Most of the enquiries from students received by the ATAR Enquiry Centre at UAC in 2010 concerned the relationship between their HSC marks and their ATARs, and the reason why one course contributed to their ATAR and not another. In this report, these two major enquiries will be discussed, along with the scaling of English. Following that, there is a summary of some of the other frequently asked questions.

### 6.1 Why is my ATAR low in comparison to my HSC marks?

The ATAR is a rank, not a mark and so there is no reason why the scores should be close. From Table A2 we can see that the median HSC mark for most 2 unit courses is between 70 and 80. The middle ATAR is 69.80 which is lower than the median score for all courses except English Standard. So for students in the middle of the candidature the ATAR will typically be lower than their average HSC mark.

There is, however, no simple rule to convert HSC marks to ATARs. Courses do not necessarily have the same scaled means from year to year and the pattern of HSC marks varies across courses so that the same HSC mark does not necessarily indicate the same position across courses. The following examples illustrate the complexity of the relationship between HSC marks and ATARs.

#### Example 1

Consider the following two students, Mia and Sue, whose HSC marks are shown in Table 6.1. These students are middle students (the 50<sup>th</sup> percentile) in all of their courses. Their average HSC marks are similar, 38.4 and 38.6 respectively, but their ATARs are quite different, 60.10 and 80.05 respectively.

**Table 6.1 Two examples of student achievement to show the effect of different scaled means**

Mia			
ATAR	Course	HSC mark per course	HSC mark per unit
60.10	Design & Technology	76	38.0
	English Advanced	81	40.5
	General Mathematics	72	36.0
	Senior Science	77	38.5
	Textiles & Design	78	39.0

Sue			
ATAR	Course	HSC mark per course	HSC mark per unit
80.05	Biology	74	37.0
	Chemistry	76	38.0
	Economics	76	38.0
	English Advanced	81	40.5
	Mathematics	79	39.5

Both Mia and Sue are at the 50<sup>th</sup> percentile in all of their courses so the reason for the difference in their ATARs is the difference in the strength of the competition in the courses they have chosen. The average scaled mean for Mia's courses was 23.4 whereas the average scaled mean for Sue's courses was 30.6. Sue has done better overall as she has competed against students of higher academic quality than Mia. Consequently her ATAR is higher.

## Example 2

Consider the following two students, Liam and Jason, whose HSC marks are shown in Table 6.2. Their average HSC marks are the same, 38.9, but their ATARs are quite different, 65.00 and 75.00 respectively.

**Table 6.2 Two examples of student achievement to show the effect of different scaled means**

Liam			
ATAR	Course	HSC mark per course	HSC mark per unit
65.00	English Standard	76	38.0
	Industrial Technology	76	38.0
	Information Processes & Technology	75	37.5
	General Mathematics	80	40.0
	Information Technology Exam	82	41.0

Jason			
ATAR	Course	HSC mark per course	HSC mark per unit
75.00	English Advanced	78	39.0
	Mathematics	74	37.0
	PDH&PE	82	41.0
	Physics	73	36.5
	Studies of Religion II	82	41.0

Jason has an ATAR that is close to his average HSC course score (77.8) whereas Liam's ATAR is much lower than his average HSC course score (77.8). If we look at Table A3 the average of the scaled means of the courses taken by Liam is 19.2 whereas for the courses taken by Jason the average of the scaled means is 28.9. This means that Jason has been competing against students of higher academic quality than Liam.

## Example 3

Consider the following two students who completed the same courses. The first student, Fred, receives an HSC mark of 35.0 per unit in each course, while the second student, Laura, receives an HSC mark of 40.0 per unit in each course (Table 6.3).

**Table 6.3 Two examples of student achievement: Fred and Laura**

Course	Fred		Laura	
	HSC mark per unit	Percentile	HSC mark per unit	Percentile
Biology	35.0	38	40.0	70
Business Studies	35.0	35	40.0	66
English Advanced	35.0	9	40.0	47
Mathematics	35.0	27	40.0	55
Modern History	35.0	25	40.0	62
Visual Arts	35.0	15	40.0	54
<b>ATAR</b>	<b>57.05</b>		<b>80.15</b>	

Their HSC marks per unit in each course differ by only 5, yet their ATARs differ by 23.10. Laura's ATAR is similar to her HSC course marks (80 per course) while Fred's ATAR is much lower than his HSC course marks (70 per course).

The reason for the large difference in the ATARs can be found in the differences in the percentiles shown in Table 6.3. The percentiles are much higher for Laura than for Fred. Given these large differences, it is not surprising that their ATARs are very different.

The courses and HSC marks shown for Fred and Laura are the same as in 2009. While their HSC marks are the same, their percentiles (their positions in their courses) have changed because of the changes in the distributions of HSC marks, so their ATARs are different. Table 6.4 presents the ATARs for 2009 and 2010.

**Table 6.4 ATARs for Fred and Laura: 2009–2010**

Year	Fred	Laura
2009	57.80	81.20
2010	57.05	80.15

The ATAR is all about position, whereas HSC marks indicate levels of achievement in individual courses.

## 6.2 Why does this course contribute to my ATAR when another course where I received a higher mark does not count?

As in previous years, this question arose after the results were released because each student's ATAR Advice Notice shows which units contribute to their ATAR. The question is not always easy to answer, especially as students are only aware of their HSC marks, which provide little information as to their rankings in their courses.

The question can often be answered by reference to data on the distributions of HSC and scaled marks in Table A3 in the Appendix. Some examples are presented to illustrate the principles involved.

The examples illustrate the general principle that a student's position in their course **and** the scaled means and standard deviations of their courses are **all** important in determining which of their courses contribute towards their ATAR.

Also remember that a given HSC mark usually corresponds to a range of raw and scaled marks.

### Example 1 – scaled means

The first example (Table 6.5) shows a set of HSC and scaled marks corresponding to results at the 90<sup>th</sup> percentile of the various course distributions.

**Table 6.5 HSC and scaled marks – example 1**

Course	Number	Scaled mean	Scaled SD	P <sub>90</sub>	
				HSC mark per unit	Scaled mark
Ancient History	12 086	24.7	10.6	45.0	38.6
Biology	15 849	26.9	9.7	44.0	39.2
Business Studies	15 830	23.6	10.4	44.5	37.5
Music 1	4 995	22.5	10.1	45.5	36.6
Physics	9 359	30.5	9.2	44.5	41.4

These HSC marks are similar and each is at the 90<sup>th</sup> percentile of a large course with comparable standard deviations. Since the position within the course candidature is the same for each course, the scaled mark will depend on the academic quality of the candidature of the course concerned. The highest scaled mark is for Physics, which has the highest scaled mean.

A student in Biology with an HSC mark of 44 can receive a higher scaled mark than a student in Ancient History with an HSC mark of 45 due to the differences in the strength of the competition reflected in the scaled mean.

Notice also that the course with the highest HSC mark, Music 1, has the lowest scaled mark.



The HSC mark on its own does not give a clear indication of the contribution a course makes towards a student's aggregate.

### Example 2 – position

Consider students with HSC marks of 47.0 per unit in Geography and English Extension 2. The student in Geography is at the 99<sup>th</sup> percentile and gains a scaled mark of 45.6 whereas the student in English Extension 2 is at the 90<sup>th</sup> percentile and gets a scaled mark of 44.2. Therefore, even though the scaled mean for English Extension 2, 36.3, is much higher than the scaled mean for Geography, 25.5, the difference in position compensates for this and the Geography student gets the higher scaled mark.

**Table 6.6 HSC and scaled marks – example 2**

	Scaled mean	Scaled SD	Percentile	HSC mark per unit	Scaled mark
English Extension 2	36.3	6.2	P <sub>90</sub>	47.0	44.2
Geography	25.5	10.3	P <sub>99</sub>	47.0	45.6

### Example 3 – standard deviations

In some situations, particularly in courses with smaller candidatures, the difference in the distribution spread is also a factor in deciding which course contributes towards the ATAR.

**Table 6.7 HSC and scaled marks – example 3**

Course	Scaled mean	Scaled SD	P <sub>75</sub>	
			HSC mark per unit	Scaled mark
French Continuers	34.8	8.5	45.0	41.3
Italian Extension	37.6	5.1	45.0	40.9

Consider students at the 75<sup>th</sup> percentile of French Continuers with HSC mark 45.0 per unit and scaled mark of 41.3 per unit and at the 75<sup>th</sup> percentile of Italian Extension with an HSC mark of 45.0 per unit and scaled mark of 40.9 per unit. Italian Extension has scaled mean of 37.6 whereas French Continuers has a scaled mean of 34.8.

The course with the lower scaled mean has the higher scaled mark corresponding to the HSC mark of 45.0 even though the position is the same in both courses. The reason the scaled marks differ is the spread in the distribution as measured by the standard deviation (SD). Italian Extension has SD 5.1 but French Continuers has SD 8.5. French Continuers has a candidature with more varied academic ability than Italian Extension.

### Example 4 – raw vs HSC marks

Recall from Section 4.6 that there is not necessarily a unique scaled mark for each HSC mark. From Table A3, by focusing on the maximum mark and the 99<sup>th</sup> percentile, we see that candidates receiving an HSC mark of 50 in English Extension 2 received scaled marks of 50.0 and 48.5. The top HSC mark in a course does not necessarily reflect the top raw mark in a course and so a candidate with an HSC mark of 50 may not receive the top scaled mark.

Also looking at Vietnamese we see that top HSC mark was 45.5 and the HSC mark corresponding to the 99<sup>th</sup> percentile was also 45.5. However, the top candidate received a scaled mark of 47.0 and the candidate at the 99<sup>th</sup> percentile of the scaled distribution received 46.4.

A similar observation can be made looking at the Electrotechnology Exam data.

The pattern of several raw marks corresponding to a given HSC mark can apply across the distribution, not just at the top of the range, and so candidates with the same HSC result can have different scaled marks.

### 6.3 If English Standard and English Advanced are scaled as a single group, why does the same HSC mark give different scaled marks in English Standard and English Advanced?

HSC marks and scaled marks are different marks. HSC marks are the marks released by the Board to students and are the result of the standards-setting exercise. Scaled marks are, however, based on raw HSC marks.

- In 2 unit English all students complete a common paper (Paper 1) which counts for 40% of the total mark. Standard and Advanced students then complete separate papers that count for 60% of the total mark.
- The Board then uses Paper 1 to place the marks of the separate Standard and Advanced papers on the same scale so that a total (raw) examination mark can be calculated for 2 unit English. The marks for Standard and Advanced students are deemed to be on the same scale.
- The Board moderates school assessments using these raw examination marks.
- The raw HSC mark which is used for scaling is then calculated.
- The raw HSC marks for the English Standard and Advanced students are combined, and scaled as a single course. A raw HSC mark yields the same scaled mark for Standard and Advanced students.
- The Board aligns the raw examination marks against standards separately for Standard and Advanced students. As a result, Advanced students on a given raw mark receive a higher aligned mark than Standard students on the same raw mark. Consequently an aligned HSC mark corresponds to different scaled marks for Standard and Advanced students. This gives the appearance that Advanced students have been disadvantaged, but this is not true.

If Table A3 in the Appendix showed the raw HSC marks rather than the reported HSC marks, it would be clear that Advanced students are not disadvantaged in the scaling process.

### 6.4 Other frequently asked questions

#### **Does the school I attend matter?**

No. The school attended does not feature in the ATAR calculation. The ATAR calculation is based only on marks provided by the Board; no other information is used.

#### **Does my postcode matter?**

No, this information is not used in the ATAR calculation.

#### **Are certain courses always “scaled down”?**

No. Scaling is carried out afresh each year: if the quality of the candidature changes, the scaled mean will also change.

#### **Is it true that if I study this course I can't get a high ATAR?**

No. As Table A1 in the Appendix shows, there are students in every course who achieve high ATARs.

#### **What impact did the variation in patterns of HSC marks have on the ATAR calculations?**

None. It is the raw HSC marks rather than the aligned HSC marks that are scaled. The fact that the percentage of students who are placed in Performance Band 6 differs across courses has no effect on the calculation of the ATAR.

#### **Why can't I use my HSC marks to check the calculation of my ATAR?**

There are two reasons. The first is the ATAR is a rank that indicates your position in relation to other students, it is not an average mark. Second raw marks are used in the calculation of the ATAR not the aligned HSC marks.

#### **Can I find out what my scaled marks are?**

No. Scaled marks are not reported to students. They are determined during an interim phase in the ATAR calculation.

**I have similar HSC marks to my friend, but we don't have similar ATARs. Why not?**

Your ATARs would be similar if your courses were the same.

**Which course should I study?**

Do not choose courses on the basis of what you believe are the likely effects of scaling. Choice of which courses to study should be determined only by your interests, your demonstrated abilities and the value of courses for your future career plans. The scaling process is designed to allow students to choose according to these principles and not, as far as university selection is concerned, be disadvantaged by their choice. It treats all students on their merits.

**Do I get a better ATAR if I study more units?**

This is a common question. While the data show that students who study more units tend to gain higher ATARs, determining causality is difficult. The relationship between number of units studied and ATAR might result from personal attributes including interest, motivation, effort and time management. You cannot assume that simply by studying more units your ATAR will be increased.

**What happens if I repeat a course?**

If a course is repeated only the last satisfactory attempt is used towards the calculation of the ATAR. Your aggregate will be re-calculated using your new mark and your previous marks. Your aggregate may increase, remain the same or decrease; it depends on your new mark. Since you are being compared with a different cohort your ATAR may increase, remain the same or decrease.

**What happens if I accumulate the HSC?**

Students who accumulate courses towards their HSC have their scaled marks calculated the year they complete the courses.

**What happens if I already have an ATAR and add a new ATAR course the following year?**

Your aggregate will be recalculated using your new course and your previous courses. Your aggregate may increase or stay the same but it will not decrease. However, since you are now being compared with a different cohort your ATAR may increase, stay the same or even decrease.

**If I'm eligible to get bonus points, does my ATAR change?**

No. Bonus points do not change your ATAR. They change your selection rank for a particular preference or course.

**If bonus points don't increase my ATAR, then how do they work?**

Universities allocate bonus points for different reasons. Examples include performance in specific HSC courses, living in or attending school in an area defined by the university and applying for consideration through Educational Access Schemes.

As the bonus points schemes for each university, and often for each course at the same university, are different then your selection rank can be different for each course you list in your course preferences. For most Year 12 applicants, their selection rank for each course preference is their ATAR. However, if a university allocates bonus points for a particular course then the applicant's selection rank for that course is their ATAR + bonus points.

## 7 Appendix

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The following courses are not included in any of the Tables A1–A6 in the Appendix as they had less than 10 students in 2010:

- Arabic Beginners
- Dutch
- Hungarian
- Korean Continuers
- Malay Background Speakers
- Maltese
- Ukrainian.

Some other courses do not appear in all Tables if they have less than the minimum number of candidates required for a particular table.

Table A1	Gender, ATAR eligibility and maximum ATAR by course Excludes courses with less than 10 students.
Table A2	Distributions of HSC marks by course Excludes courses with less than 10 students.
Table A3	Descriptive statistics and selected percentiles for HSC marks and scaled marks by course Excludes courses with less than 10 students and no percentile data are given for courses with less than 40 students.
Table A4	Distributions of HSC marks by course: 2009 – 2010 Excludes courses with less than 40 students in either year.
Table A5	Distributions of scaled marks by course: 2009 – 2010 Excludes courses with less than 40 students in either year.
Table A6	Courses that contribute to the ATAR Excludes courses with less than 10 students.
Table A7	ATAR distribution
Table A8	Relationship between ATAR and percentiles: 2009 – 2010
Table A9	Relationship between ATAR and aggregates: 2009 – 2010

**Table A1 Gender, ATAR eligibility and maximum ATAR by course**

- Notes: (i) The **Number All** column shows the number of students who completed the course in 2010 or in a previous year (and who have done at least one ATAR course in 2010).
- (ii) The **Number HSC** column shows the number of students who completed the course in 2010 or in a previous year and who received an HSC award in 2010.
- (iii) The **Number ATAR** column shows the number of students who completed the course in 2010 or in a previous year and who were eligible for an ATAR in 2010.
- (iv) The **% Female** column shows the percentage of students in the course who were female.
- (v) The **% HSC** column shows the percentage of students in the course who received an HSC award in 2010.
- (vi) The **% ATAR eligible** column shows the percentage of students in the course who were eligible for an ATAR in 2010.
- (vii) The **Maximum ATAR** column shows the maximum ATAR achieved by a student doing that course.
- (viii) The table excludes courses with less than 10 students.

Course	Number All	Number HSC	Number ATAR	% Female	% HSC	% ATAR eligible	Maximum ATAR
Aboriginal Studies	345	325	194	68.1	94.2	56.2	96.60
Agriculture	1451	1367	1079	50.9	94.2	74.4	99.95
Ancient History	12258	12042	11149	57.4	98.2	91.0	99.95
Biology	16100	15767	15308	61.3	97.9	95.1	99.95
Business Studies	16013	15693	14568	48.5	98.0	91.0	99.85
Chemistry	10500	10309	10272	45.4	98.2	97.8	99.95
Community & Family Studies	5778	5685	4507	94.0	98.4	78.0	98.35
Dance	844	814	705	94.7	96.4	83.5	99.10
Design & Technology	3624	3548	3100	42.6	97.9	85.5	99.40
Drama	4548	4426	3972	69.6	97.3	87.3	99.90
Earth & Environmental Science	1466	1422	1334	49.0	97.0	91.0	99.95
Economics	6172	6086	6056	37.4	98.6	98.1	99.95
Engineering Studies	1830	1805	1747	4.3	98.6	95.5	99.90
English Standard	34711	33665	24838	47.2	97.0	71.6	99.80
English Advanced	27360	27017	26644	58.6	98.7	97.4	99.95
English Extension 1	5617	5572	5566	65.2	99.2	99.1	99.95
English Extension 2	2214	2206	2205	67.9	99.6	99.6	99.95
ESL	3088	2980	2739	50.1	96.5	88.7	99.95
Food Technology	3524	3462	2786	75.2	98.2	79.1	99.65
Geography	4692	4596	4328	46.7	98.0	92.2	99.95
Industrial Technology	4084	3975	2611	10.5	97.3	63.9	99.10
Information Processes & Technology	4967	4622	4251	27.2	93.1	85.6	99.95
Legal Studies	8745	8589	8161	60.9	98.2	93.3	99.95
General Mathematics	31206	30565	26077	50.3	97.9	83.6	99.60
Mathematics	17406	16331	16246	45.8	93.8	93.3	99.95
Mathematics Extension 1	9317	8973	8974	41.2	96.3	96.3	99.95
Mathematics Extension 2	3530	3448	3452	37.3	97.7	97.8	99.95
Modern History	10177	9976	9514	54.9	98.0	93.5	99.95
History Extension	2199	2194	2194	62.3	99.8	99.8	99.95
Music 1	5060	4942	4295	44.1	97.7	84.9	99.60
Music 2	772	738	735	50.3	95.6	95.2	99.95
Music Extension	455	448	448	51.9	98.5	98.5	99.95
PDH&PE	13600	13414	12050	53.4	98.6	88.6	99.70
Physics	9462	9332	9269	22.5	98.6	98.0	99.95

Table A1 Gender, ATAR eligibility and maximum ATAR by course (continued)

Course	Number All	Number HSC	Number ATAR	% Female	% HSC	% ATAR eligible	Maximum ATAR
Senior Science	4948	4813	4049	44.8	97.3	81.8	99.55
Society & Culture	4032	3923	3576	82.2	97.3	88.7	99.70
Software Design & Development	1820	1744	1659	9.3	95.8	91.2	99.95
Studies of Religion I	9700	9527	9149	53.0	98.2	94.3	99.95
Studies of Religion II	4497	4412	4299	66.5	98.1	95.6	99.85
Textiles & Design	2282	2253	1875	97.8	98.7	82.2	99.65
Visual Arts	9710	9504	8195	70.2	97.9	84.4	99.95
Arabic Continuers	230	219	199	66.1	95.2	86.5	98.95
Arabic Extension	69	66	64	71.0	95.7	92.8	97.75
Armenian	29	24	24	55.2	82.8	82.8	97.20
Chinese Beginners	42	42	40	61.9	100.0	95.2	98.45
Chinese Continuers	118	115	115	58.5	97.5	97.5	99.80
Chinese Extension	37	35	35	62.2	94.6	94.6	99.55
Chinese Background Speakers	1109	1076	1043	52.3	97.0	94.0	99.85
Classical Greek Continuers	12	12	12	25.0	100.0	100.0	99.65
Classical Greek Extension	12	12	12	25.0	100.0	100.0	99.65
Classical Hebrew Continuers	38	38	37	60.5	100.0	97.4	99.95
Classical Hebrew Extension	21	21	21	66.7	100.0	100.0	99.95
Croatian	18	18	18	44.4	100.0	100.0	99.20
Filipino	14	12	11	57.1	85.7	78.6	96.25
French Beginners	665	651	611	86.3	97.9	91.9	99.95
French Continuers	921	866	862	68.6	94.0	93.6	99.95
French Extension	225	210	209	71.1	93.3	92.9	99.95
German Beginners	101	99	96	74.3	98.0	95.0	99.50
German Continuers	353	335	331	60.3	94.9	93.8	99.95
German Extension	98	98	98	58.2	100.0	100.0	99.95
Hindi	34	25	25	76.5	73.5	73.5	99.95
Indonesian Beginners	53	53	51	71.7	100.0	96.2	98.25
Indonesian Continuers	69	66	66	65.2	95.7	95.7	99.00
Indonesian Extension	22	21	21	54.5	95.5	95.5	99.00
Indonesian Background Speakers	109	95	95	45.0	87.2	87.2	97.05
Italian Beginners	360	356	315	73.6	98.9	87.5	99.85
Italian Continuers	337	321	309	71.5	95.3	91.7	99.95
Italian Extension	60	59	59	70.0	98.3	98.3	99.95
Japanese Beginners	666	656	635	67.1	98.5	95.3	99.75
Japanese Continuers	801	787	779	66.8	98.3	97.3	99.95
Japanese Extension	285	285	285	67.7	100.0	100.0	99.95
Japanese Background Speakers	42	39	36	66.7	92.9	85.7	95.25
Khmer	25	22	21	68.0	88.0	84.0	96.70
Korean Background Speakers	91	88	88	54.9	96.7	96.7	99.20
Latin Continuers	177	173	173	39.0	97.7	97.7	99.95
Latin Extension	98	96	96	39.8	98.0	98.0	99.95
Macedonian	31	31	30	77.4	100.0	96.8	98.60
Modern Greek Beginners	48	48	43	62.5	100.0	89.6	99.95
Modern Greek Continuers	110	95	91	70.0	86.4	82.7	98.20

Table A1 Gender, ATAR eligibility and maximum ATAR by course (continued)

Course	Number All	Number HSC	Number ATAR	% Female	% HSC	% ATAR eligible	Maximum ATAR
Modern Greek Extension	40	37	37	72.5	92.5	92.5	98.20
Modern Hebrew	54	40	40	70.4	74.1	74.1	99.95
Persian	52	38	35	48.1	73.1	67.3	97.45
Polish	35	30	30	60.0	85.7	85.7	98.75
Portuguese	21	21	16	47.6	100.0	76.2	96.25
Russian	20	18	18	50.0	90.0	90.0	98.90
Serbian	21	19	18	61.9	90.5	85.7	94.25
Spanish Beginners	215	210	185	78.6	97.7	86.0	99.85
Spanish Continuers	175	166	152	61.1	94.9	86.9	97.55
Spanish Extension	51	48	48	70.6	94.1	94.1	94.75
Swedish	14	8	8	92.9	57.1	57.1	96.10
Tamil	50	28	28	62.0	56.0	56.0	99.70
Turkish	36	34	33	63.9	94.4	91.7	91.45
Vietnamese	186	168	158	52.7	90.3	84.9	99.85
Accounting	541	531	506	48.4	98.2	93.5	99.95
Automotive Exam	284	256	127	6.7	90.1	44.7	90.40
Business Services Exam	1495	1444	1129	80.8	96.6	75.5	98.20
Construction Exam	1578	1494	942	1.1	94.7	59.7	90.70
Electrotechnology Exam	178	158	112	1.7	88.8	62.9	96.55
Entertainment Exam	835	801	670	53.2	95.9	80.2	99.35
Hospitality Exam	5204	5058	4343	70.0	97.2	83.5	98.70
Information Technology Exam	1648	1521	1315	22.0	92.3	79.8	98.10
Metal & Engineering Exam	680	653	378	2.4	96.0	55.6	90.40
Primary Industries Exam	592	545	366	42.9	92.1	61.8	96.45
Retail Services Exam	976	916	651	72.6	93.9	66.7	98.80
Tourism & Events Exam	350	345	279	93.1	98.6	79.7	97.55
Philosophy Distinction	60	43	43	36.7	71.7	71.7	99.95
<b>Total</b>	<b>68536</b>	<b>63825</b>	<b>54221</b>	<b>51.6</b>	<b>93.1</b>	<b>79.1</b>	<b>99.95</b>

**Table A2 Distributions of HSC marks by course**

- Notes: (i) The **Median HSC mark** column shows the median HSC mark per course.  
(ii) The **Median Band** column indicates the Performance Band in which the median HSC mark lies.  
(iii) The **Percentage of Students in Performance Band** columns show the percentage of a course candidature in each of the Performance Bands 6 to 2. Extension courses show only bands 4 to 2 as they have four Bands only: E1 to E4.  
(iv) The table excludes courses with less than 10 students.

Course	Number	Median HSC mark	Median Band	Percentage of students in Performance Band				
				6	5	4	3	2
Aboriginal Studies	339	75	4	9	29	28	22	8
Agriculture	1413	70	4	9	20	24	26	14
Ancient History	12086	75	4	11	27	26	20	9
Biology	15849	74	4	7	26	31	25	8
Business Studies	15830	76	4	10	28	31	23	7
Chemistry	10330	76	4	10	29	32	18	6
Community & Family Studies	5738	74	4	5	24	36	25	8
Dance	801	75	4	11	23	36	26	3
Design & Technology	3599	76	4	8	26	41	21	4
Drama	4492	77	4	11	29	39	18	3
Earth & Environmental Science	1449	77	4	8	35	36	17	4
Economics	6108	76	4	13	28	27	17	8
Engineering Studies	1818	77	4	8	31	37	15	6
English Standard	34371	66	3	<1	4	31	37	20
English Advanced	27132	81	5	14	44	35	6	1
English Extension 1	5578	41	E3			25	61	14
English Extension 2	2201	41	E3			28	53	17
ESL	3079	74	4	4	22	39	25	8
Food Technology	3500	73	4	7	23	28	23	12
Geography	4600	77	4	9	30	35	19	6
Industrial Technology	4061	73	4	9	21	29	22	11
Information Processes & Technology	4657	74	4	10	25	31	23	8
Legal Studies	8644	75	4	12	26	26	19	11
General Mathematics	30992	72	4	7	20	31	29	11
Mathematics	17152	79	4	19	29	27	14	6
Mathematics Extension 1	9116	42	E3			37	46	15
Mathematics Extension 2	3469	86	E3			38	53	9
Modern History	10054	78	4	8	34	36	14	5
History Extension	2191	39	E3			23	48	26
Music 1	4995	82	5	16	44	27	10	1
Music 2	747	86	5	32	50	17	1	<1
Music Extension	447	45	E4			59	40	1
PDH&PE	13496	76	4	9	30	32	23	5
Physics	9359	76	4	8	31	32	21	5
Senior Science	4901	77	4	8	32	36	18	5
Society & Culture	3961	74	4	9	25	32	25	9
Software Design & Development	1760	73	4	8	19	33	26	11
Studies of Religion I	9538	40	5	14	37	28	16	4
Studies of Religion II	4468	79	4	10	40	28	15	6
Textiles & Design	2268	78	4	14	32	26	18	8



Table A2 Distributions of HSC marks by course (continued)

Course	Number	Median HSC mark	Median Band	Percentage of students in Performance Band				
				6	5	4	3	2
Visual Arts	9600	80	5	12	39	37	11	1
Arabic Continuers	223	77	4	4	35	39	18	4
Arabic Extension	65	36	E3			8	63	29
Armenian	29	85	5	28	48	21	3	
Chinese Beginners	42	88	5	38	33	12	14	2
Chinese Continuers	118	88	5	43	43	6	8	
Chinese Extension	37	46	E4			68	32	
Chinese Background Speakers	1102	82	5	12	51	29	7	1
Classical Greek Continuers	12	93	6	83	8	8		
Classical Greek Extension	12	48	E4			83	17	
Classical Hebrew Continuers	38	83	5	26	45	16	11	3
Classical Hebrew Extension	21	46	E4			67	33	
Croatian	15	79	4	20	27	47	7	
Filipino	11	83	5	18	36	27	18	
French Beginners	664	78	4	19	26	28	12	10
French Continuers	881	82	5	27	33	26	10	3
French Extension	220	44	E3			46	45	10
German Beginners	97	77	4	21	25	25	19	7
German Continuers	338	81	5	24	31	23	17	5
German Extension	93	40	E3			31	55	12
Hindi	16	83	5		63	19	19	
Indonesian Beginners	53	77	4	21	26	19	26	8
Indonesian Continuers	69	84	5	33	33	23	7	3
Indonesian Extension	22	42	E3			41	41	14
Indonesian Background Speakers	109	77	4	1	31	49	15	4
Italian Beginners	357	75	4	17	20	28	19	10
Italian Continuers	320	80	5	23	28	28	15	4
Italian Extension	60	42	E3			33	60	7
Japanese Beginners	663	77	4	17	26	24	17	9
Japanese Continuers	781	79	4	21	27	29	17	5
Japanese Extension	285	41	E3			26	56	17
Japanese Background Speakers	41	84	5	24	61	12	2	
Khmer	23	86	5	17	65	13	4	
Korean Background Speakers	88	84	5	24	48	23	6	
Latin Continuers	176	91	6	54	27	15	5	
Latin Extension	97	47	E4			77	23	
Macedonian	31	91	6	55	16	19	10	
Modern Greek Beginners	48	80	5	38	17	23	10	10
Modern Greek Continuers	97	80	5	22	29	29	18	3
Modern Greek Extension	35	44	E3			46	43	11
Modern Hebrew	45	88	5	47	53			
Persian	45	87	5	38	27	24	7	4
Polish	33	96	6	94	6			
Portuguese	19	79	4	5	42	32	16	5
Russian	18	84	5	33	39	22	6	

Table A2 Distributions of HSC marks by course (continued)

Course	Number	Median HSC mark	Median Band	Percentage of students in Performance Band				
				6	5	4	3	2
Serbian	21	84	5	5	71	19	5	
Spanish Beginners	213	76	4	15	22	33	15	13
Spanish Continuers	166	81	5	19	37	34	10	
Spanish Extension	46	37	E3			7	65	28
Tamil	24	85	5	13	83	4		
Turkish	31	83	5	16	42	29	13	
Vietnamese	181	75	4	2	27	45	19	4
Accounting	530	79	4	14	32	22	14	9
Automotive Exam	282	71	4		17	41	38	4
Business Services Exam	1462	73	4	4	18	42	27	7
Construction Exam	1536	74	4	1	20	47	23	8
Electrotechnology Exam	172	76	4	5	28	31	26	9
Entertainment Exam	828	74	4	4	19	44	28	5
Hospitality Exam	5150	77	4	6	30	40	18	6
Information Technology Exam	1598	73	4	2	20	44	23	10
Metal & Engineering Exam	671	71	4	2	16	39	28	11
Primary Industries Exam	578	74	4	3	16	54	22	5
Retail Services Exam	954	74	4	1	20	49	26	4
Tourism & Events Exam	349	75	4	4	31	39	20	5
Philosophy Distinction	53	83	5	11	68	21		

**Table A3 Descriptive statistics and selected percentiles for HSC marks and scaled marks by course**

- Notes: (i) The **P99, P90, P75, P50, P25** columns refer to the 99th, 90th, 75th, 50th and 25th percentiles respectively.
- (ii) The table excludes courses with less than 10 students and no percentile data are given for courses with less than 40 students.
- (iii) This table should not be used as a simple HSC to scaled mark conversion table. For each HSC mark there can be a range of raw marks and therefore a range of scaled marks.

Course	Number	Type of mark	Mean	SD	Max. mark	P99	P90	P75	P50	P25
Aboriginal Studies	339	HSC	37.1	6.9	49.5	49.5	44.5	42.0	37.5	33.0
		scaled	15.4	11.8	43.8	43.4	32.6	23.2	12.4	5.2
Agriculture	1413	HSC	35.2	7.3	49.0	48.0	44.5	40.5	35.0	31.0
		scaled	20.6	11.3	47.4	45.1	36.9	29.1	19.0	11.6
Ancient History	12086	HSC	36.8	7.1	49.5	48.0	45.0	42.0	37.5	32.5
		scaled	24.7	10.6	49.7	45.4	38.6	32.9	25.1	16.8
Biology	15849	HSC	36.9	5.6	48.5	47.0	44.0	41.0	37.0	33.0
		scaled	26.9	9.7	49.7	44.7	39.2	34.3	27.8	20.1
Business Studies	15830	HSC	37.4	5.8	49.0	47.5	44.5	42.0	38.0	33.5
		scaled	23.6	10.4	48.4	43.5	37.5	31.8	24.0	15.4
Chemistry	10330	HSC	37.4	6.5	49.0	47.0	45.0	42.0	38.0	34.0
		scaled	31.7	9.2	50.0	45.9	42.2	38.8	33.5	26.1
Community & Family Studies	5738	HSC	36.4	5.5	49.0	47.0	43.0	40.5	37.0	33.0
		scaled	19.7	9.9	43.8	41.0	33.3	27.2	19.3	11.7
Dance	801	HSC	37.8	5.1	49.5	48.0	45.0	41.5	37.5	34.0
		scaled	23.0	9.5	45.5	42.7	37.4	29.8	22.3	15.8
Design & Technology	3599	HSC	37.9	4.8	49.0	48.0	44.0	41.0	38.0	35.0
		scaled	21.7	10.1	46.2	44.2	36.0	29.3	20.7	13.7
Drama	4492	HSC	38.4	4.8	49.5	47.5	45.0	42.0	38.5	35.5
		scaled	24.3	10.2	49.3	45.9	38.3	31.7	24.5	16.7
Earth & Environmental Science	1449	HSC	38.3	5.0	49.5	47.0	44.0	42.0	38.5	35.5
		scaled	25.0	9.8	48.6	44.2	37.3	32.2	25.4	18.2
Economics	6108	HSC	36.9	7.7	49.5	47.5	45.5	42.5	38.0	33.0
		scaled	31.0	9.6	50.0	45.9	41.9	38.4	32.7	25.3
Engineering Studies	1818	HSC	37.8	5.6	48.5	47.0	44.5	41.5	38.5	35.0
		scaled	25.5	9.1	47.3	43.8	37.1	32.2	25.9	19.3
English Standard	34371	HSC	32.1	5.7	48.5	42.0	38.0	36.0	33.0	29.5
		scaled	17.3	7.8	48.7	36.4	27.6	22.5	17.0	11.6
English Advanced	27132	HSC	40.5	3.9	49.5	47.5	45.5	43.5	40.5	38.0
		scaled	32.5	7.9	50.0	46.9	42.5	38.8	33.1	27.1
English Extension 1	5578	HSC	40.3	5.2	50.0	48.0	46.0	44.0	41.0	37.0
		scaled	36.4	6.0	50.0	46.4	43.2	40.7	37.3	32.8
English Extension 2	2201	HSC	40.0	6.3	50.0	50.0	47.0	45.0	41.0	36.0
		scaled	36.3	6.2	50.0	48.5	44.2	40.8	36.6	32.3
ESL	3079	HSC	36.2	5.6	48.5	46.5	42.5	40.0	37.0	33.0
		scaled	21.9	11.6	49.8	46.1	37.5	30.7	21.9	12.6
Food Technology	3500	HSC	35.4	7.2	49.0	47.0	44.0	41.0	36.5	31.0
		scaled	20.2	10.7	46.0	42.6	35.2	28.6	19.5	11.5
Geography	4600	HSC	37.8	5.4	49.0	47.0	44.5	41.5	38.5	34.5
		scaled	25.5	10.3	50.0	45.6	38.8	33.2	26.0	17.9

Table A3 Descriptive statistics and selected percentiles for HSC marks and scaled marks by course (continued)

Course	Number	Type of mark	Mean	SD	Max. mark	P99	P90	P75	P50	P25
Industrial Technology	4061	HSC	35.7	7.3	50.0	48.5	44.5	41.0	36.5	31.5
		scaled	16.6	9.6	40.1	37.9	30.8	23.6	15.4	8.8
Information Processes & Technology	4657	HSC	36.8	6.4	49.0	47.5	44.5	41.5	37.0	33.0
		scaled	21.9	10.7	47.7	43.4	36.3	30.2	21.9	13.6
Legal Studies	8644	HSC	36.6	7.1	49.5	47.5	45.0	42.0	37.5	32.0
		scaled	25.3	10.8	50.0	45.5	39.7	33.9	25.8	16.9
General Mathematics	30992	HSC	35.8	5.9	50.0	47.0	43.5	40.0	36.0	32.0
		scaled	21.1	10.0	45.4	41.0	35.0	29.1	20.8	12.9
Mathematics	17152	HSC	38.2	7.5	50.0	48.5	46.0	43.5	39.5	35.0
		scaled	30.7	9.4	50.0	46.5	41.9	37.9	31.9	24.8
Mathematics Extension 1	9116	HSC	40.6	7.0	50.0	49.5	48.0	46.0	42.0	37.0
		scaled	39.8	6.9	50.0	49.1	47.1	44.8	41.3	36.6
Mathematics Extension 2	3469	HSC	41.8	5.4	50.0	48.5	47.0	46.0	43.0	39.0
		scaled	43.8	4.5	50.0	49.2	47.9	46.6	44.8	42.3
Modern History	10054	HSC	37.9	5.9	49.5	47.0	44.5	42.0	39.0	35.5
		scaled	27.2	10.4	50.0	45.6	39.7	35.2	28.6	20.3
History Extension	2191	HSC	38.3	7.0	50.0	49.0	47.0	44.0	39.0	34.0
		scaled	34.4	6.3	49.3	46.2	42.3	38.9	34.8	30.4
Music 1	4995	HSC	40.3	4.6	49.5	48.0	45.5	43.5	41.0	37.5
		scaled	22.5	10.1	47.0	43.7	36.6	29.7	21.9	14.9
Music 2	747	HSC	42.9	3.3	50.0	49.0	47.0	45.5	43.0	41.0
		scaled	33.4	7.8	50.0	47.9	43.1	39.7	33.8	28.3
Music Extension	447	HSC	44.9	3.7	50.0	50.0	49.0	48.0	45.0	43.0
		scaled	35.4	7.5	50.0	50.0	47.1	40.5	34.5	30.2
PDH&PE	13496	HSC	37.7	5.3	49.5	47.5	44.5	42.0	38.0	34.0
		scaled	23.2	10.2	47.6	43.3	36.9	31.1	23.3	15.1
Physics	9359	HSC	37.6	5.7	49.5	47.0	44.5	42.0	38.0	34.0
		scaled	30.5	9.2	50.0	45.6	41.4	37.6	31.9	24.7
Senior Science	4901	HSC	38.0	5.1	49.5	47.5	44.0	41.5	38.5	35.0
		scaled	19.5	9.9	43.8	40.3	32.8	27.1	19.3	11.5
Society & Culture	3961	HSC	37.0	5.7	50.0	48.0	44.5	41.0	37.0	33.0
		scaled	23.8	10.4	48.7	45.5	38.0	31.6	23.4	15.8
Software Design & Development	1760	HSC	36.2	6.0	49.5	47.5	44.0	40.5	36.5	32.0
		scaled	24.6	9.9	47.6	43.5	37.7	32.3	25.4	17.1
Studies of Religion I	9538	HSC	38.9	5.3	50.0	48.0	45.0	43.0	40.0	35.0
		scaled	27.4	8.7	47.8	43.9	38.4	34.0	28.1	21.5
Studies of Religion II	4468	HSC	38.5	5.6	49.0	47.0	44.5	42.5	39.5	35.0
		scaled	27.5	9.8	50.0	46.0	39.8	34.9	28.3	20.7
Textiles & Design	2268	HSC	38.2	6.3	49.5	48.5	45.5	43.0	39.0	34.0
		scaled	22.4	10.6	47.5	44.6	37.1	30.6	22.2	14.1
Visual Arts	9600	HSC	39.6	4.3	49.5	48.0	45.0	43.0	40.0	37.0
		scaled	23.2	10.5	49.0	45.8	38.0	31.1	22.6	15.0
Arabic Continuers	223	HSC	38.1	4.4	48.0	47.0	43.0	41.5	38.5	35.5
		scaled	18.2	10.6	44.3	43.3	32.9	26.4	17.4	9.3

Table A3 Descriptive statistics and selected percentiles for HSC marks and scaled marks by course (continued)

Course	Number	Type of mark	Mean	SD	Max. mark	P99	P90	P75	P50	P25
Arabic Extension	65	HSC	36.7	4.8	48.0	48.0	44.0	40.0	36.0	34.0
		scaled	25.6	6.7	41.8	41.8	35.2	29.7	24.8	21.5
Armenian	29	HSC	42.3	3.6	47.5					
		scaled	27.1	11.8	50.0					
Chinese Beginners	42	HSC	41.9	5.8	49.0	49.0	48.0	47.0	44.0	38.0
		scaled	26.4	13.5	50.0	50.0	43.9	38.8	27.6	15.0
Chinese Continuers	118	HSC	43.0	3.9	48.0	47.5	46.5	45.5	44.0	41.5
		scaled	32.3	10.2	50.0	48.3	43.4	39.8	34.7	25.2
Chinese Extension	37	HSC	45.0	2.9	48.0					
		scaled	36.0	7.8	50.0					
Chinese Background Speakers	1102	HSC	40.5	3.9	48.0	47.0	45.0	43.5	41.0	38.0
		scaled	21.9	10.8	48.5	45.8	36.8	30.2	21.1	13.3
Classical Greek Continuers	12	HSC	45.7	3.0	49.0					
		scaled	39.1	8.4	50.0					
Classical Greek Extension	12	HSC	47.4	1.8	49.0					
		scaled	39.1	8.3	50.0					
Classical Hebrew Continuers	38	HSC	40.9	4.7	47.5					
		scaled	36.9	9.0	50.0					
Classical Hebrew Extension	21	HSC	45.2	2.8	48.0					
		scaled	40.7	5.8	50.0					
Croatian	15	HSC	40.5	3.5	46.0					
		scaled	26.6	8.6	43.6					
Filipino	11	HSC	40.4	3.9	46.0					
		scaled	14.4	10.9	38.6					
French Beginners	664	HSC	37.8	7.7	49.5	49.0	46.5	43.5	39.0	34.0
		scaled	25.6	10.4	49.2	46.6	39.1	33.6	26.0	18.3
French Continuers	881	HSC	40.6	5.6	50.0	49.0	47.0	45.0	41.0	37.5
		scaled	34.8	8.5	50.0	47.8	44.4	41.3	36.3	29.3
French Extension	220	HSC	42.4	5.0	49.0	48.0	47.0	46.0	44.0	40.0
		scaled	40.5	5.4	50.0	49.3	46.7	44.5	41.5	37.5
German Beginners	97	HSC	37.9	7.2	48.5	48.5	46.5	43.5	38.5	33.0
		scaled	28.8	10.0	49.9	49.9	42.2	36.4	28.5	20.6
German Continuers	338	HSC	39.5	5.8	49.0	48.5	46.5	44.5	40.5	35.5
		scaled	33.4	9.1	50.0	48.9	44.2	40.5	34.9	27.4
German Extension	93	HSC	40.4	5.9	50.0	50.0	47.0	45.0	40.0	38.0
		scaled	39.2	4.7	50.0	50.0	44.9	42.6	38.7	36.8
Hindi	16	HSC	40.1	3.5	44.5					
		scaled	29.9	10.9	50.0					
Indonesian Beginners	53	HSC	38.5	6.4	49.0	49.0	47.0	44.5	38.5	33.0
		scaled	26.4	10.6	47.9	47.9	41.2	35.9	24.8	17.9
Indonesian Continuers	69	HSC	41.7	4.7	49.5	49.5	47.0	45.0	42.0	39.0
		scaled	32.5	8.7	50.0	50.0	43.2	38.3	32.7	27.4
Indonesian Extension	22	HSC	40.7	6.7	48.0					
		scaled	35.4	6.7	50.0					

Table A3 Descriptive statistics and selected percentiles for HSC marks and scaled marks by course (continued)

Course	Number	Type of mark	Mean	SD	Max. mark	P99	P90	P75	P50	P25
Indonesian Background Speakers	109	HSC	37.6	3.9	45.5	44.0	42.0	40.0	38.5	36.0
		scaled	28.1	10.1	50.0	47.8	40.9	34.3	29.5	22.7
Italian Beginners	357	HSC	36.7	7.9	50.0	49.5	47.0	42.0	37.5	32.0
		scaled	25.9	11.1	50.0	48.2	42.0	33.5	26.0	17.2
Italian Continuers	320	HSC	39.2	6.5	49.0	49.0	46.5	44.0	40.0	35.5
		scaled	30.0	9.7	50.0	49.1	41.7	37.0	30.7	23.2
Italian Extension	60	HSC	41.5	4.5	49.0	49.0	47.0	45.0	42.0	38.0
		scaled	37.6	5.1	50.0	50.0	45.3	40.9	37.0	33.6
Japanese Beginners	663	HSC	37.4	7.6	49.5	49.0	46.5	43.0	38.5	33.5
		scaled	24.3	11.0	47.4	44.1	38.8	32.9	25.0	16.5
Japanese Continuers	781	HSC	39.1	6.0	48.5	48.0	46.0	44.0	39.5	35.0
		scaled	31.7	9.6	50.0	48.2	43.6	39.5	32.4	24.9
Japanese Extension	285	HSC	40.0	5.6	49.0	48.0	46.0	45.0	41.0	37.0
		scaled	37.9	5.0	50.0	46.8	43.6	41.6	38.5	35.5
Japanese Background Speakers	41	HSC	42.3	3.1	48.5	48.5	46.0	44.0	42.0	40.5
		scaled	21.7	9.9	45.9	45.9	36.1	25.1	19.7	14.4
Khmer	23	HSC	42.0	3.1	46.0					
		scaled	20.2	14.4	49.4					
Korean Background Speakers	88	HSC	41.5	4.0	49.0	49.0	46.5	44.5	42.0	38.5
		scaled	24.2	9.5	46.8	46.8	36.9	30.8	24.5	16.4
Latin Continuers	176	HSC	43.8	4.3	50.0	49.0	48.0	47.0	45.5	41.0
		scaled	39.2	6.8	50.0	48.7	46.5	44.6	41.4	34.8
Latin Extension	97	HSC	46.5	2.7	50.0	50.0	49.0	48.0	47.0	45.0
		scaled	41.5	6.1	50.0	50.0	48.2	45.9	42.8	38.1
Macedonian	31	HSC	43.2	5.3	49.0					
		scaled	24.6	15.3	50.0					
Modern Greek Beginners	48	HSC	39.8	7.2	49.0	49.0	47.0	46.5	40.0	35.0
		scaled	25.2	11.8	50.0	50.0	39.6	35.8	23.3	16.7
Modern Greek Continuers	97	HSC	39.5	5.1	48.0	48.0	46.5	43.5	40.0	36.0
		scaled	26.8	10.7	49.2	49.2	42.5	34.7	26.1	19.0
Modern Greek Extension	35	HSC	42.1	4.9	48.0					
		scaled	33.9	6.2	48.7					
Modern Hebrew	45	HSC	44.5	2.1	49.0	49.0	47.5	45.5	44.0	43.0
		scaled	38.8	6.0	50.0	50.0	46.2	42.9	38.5	34.6
Persian	45	HSC	41.5	5.5	48.0	48.0	47.5	46.0	43.5	37.5
		scaled	19.2	12.2	44.1	44.1	39.8	24.4	17.0	9.8
Polish	33	HSC	47.7	1.7	50.0					
		scaled	29.3	9.4	47.1					
Portuguese	19	HSC	37.9	5.0	46.0					
		scaled	22.3	11.2	49.3					
Russian	18	HSC	42.6	4.1	49.5					
		scaled	28.8	9.8	48.8					
Serbian	21	HSC	41.0	3.1	46.0					
		scaled	23.5	9.3	44.7					

Table A3 Descriptive statistics and selected percentiles for HSC marks and scaled marks by course (continued)

Course	Number	Type of mark	Mean	SD	Max. mark	P99	P90	P75	P50	P25
Spanish Beginners	213	HSC	37.5	6.4	49.5	48.5	46.0	42.5	38.0	34.0
		scaled	24.2	11.6	50.0	48.3	40.6	33.5	23.6	16.0
Spanish Continuers	166	HSC	40.4	4.1	49.0	48.5	45.5	43.0	40.5	38.0
		scaled	22.7	10.2	46.6	46.3	37.9	29.5	21.7	15.5
Spanish Extension	46	HSC	37.6	4.7	49.0	49.0	44.0	41.0	36.0	34.0
		scaled	30.5	6.1	45.3	45.3	38.0	35.1	29.5	26.5
Turkish	31	HSC	40.8	4.3	48.5					
		scaled	19.8	10.8	43.3					
Vietnamese	181	HSC	37.0	4.8	45.5	45.5	42.5	40.5	37.5	34.5
		scaled	20.4	10.9	47.0	46.4	36.2	28.8	19.1	11.7
Accounting	530	HSC	36.9	8.8	50.0	49.0	46.0	43.5	39.5	32.5
		scaled	29.1	12.1	50.0	48.2	44.2	39.3	31.2	20.4
Automotive Exam	282	HSC	35.6	3.9	43.5	43.5	40.5	38.5	35.5	33.0
		scaled	13.1	8.8	34.6	34.6	26.4	18.7	10.4	6.2
Business Services Exam	1462	HSC	36.2	5.2	49.0	46.5	43.0	39.0	36.5	33.5
		scaled	18.5	9.7	42.4	38.7	32.7	25.3	18.0	11.0
Construction Exam	1536	HSC	36.4	4.3	48.0	45.0	41.5	39.5	37.0	34.0
		scaled	15.6	9.2	38.3	36.0	28.0	22.3	14.8	8.1
Electrotechnology Exam	172	HSC	37.0	5.1	46.0	46.0	43.5	40.5	38.0	33.0
		scaled	17.9	9.0	39.2	38.4	31.5	23.5	18.1	10.1
Entertainment Exam	828	HSC	36.8	4.4	49.0	46.5	43.0	39.5	37.0	34.0
		scaled	21.2	9.5	44.7	41.7	35.0	28.3	21.3	14.0
Hospitality Exam	5150	HSC	37.8	5.0	48.5	46.5	44.0	41.5	38.5	35.0
		scaled	19.8	9.6	43.5	39.7	33.1	27.3	19.9	12.7
Information Technology Exam	1598	HSC	36.1	4.9	49.0	45.5	42.0	39.5	36.5	33.0
		scaled	18.9	9.4	42.0	37.9	31.7	26.6	19.1	11.3
Metal & Engineering Exam	671	HSC	35.0	5.6	48.0	46.5	41.5	39.0	35.5	32.0
		scaled	15.3	8.5	36.4	35.3	27.0	21.5	14.2	8.9
Primary Industries Exam	578	HSC	36.8	3.9	49.0	46.5	41.5	39.0	37.0	34.5
		scaled	17.1	9.3	40.1	38.2	30.1	23.9	16.5	9.5
Retail Services Exam	954	HSC	36.7	4.1	46.5	45.0	41.5	39.0	37.0	34.0
		scaled	16.1	9.9	40.4	38.3	30.5	23.0	15.2	7.7
Tourism & Events Exam	349	HSC	37.5	4.9	47.0	45.5	43.5	40.5	37.5	34.5
		scaled	20.1	9.1	42.1	38.6	33.2	26.2	18.9	12.7
Philosophy Distinction	53	HSC	41.6	2.8	50.0	50.0	45.0	43.0	41.5	40.0
		scaled	39.9	3.3	50.0	50.0	43.9	41.4	39.6	38.0

**Table A4 Distributions of HSC marks by course: 2009 – 2010**

- Notes: (i) Columns **45, 40, 35, 30 and 25** show the percentage of the course candidature with an HSC mark less than the specified mark.
- (ii) The table excludes courses with less than 40 students in either year.

Course	Year	Number	Percentage of students with HSC mark less than:				
			45	40	35	30	25
Aboriginal Studies	2010	339	90.9	62.2	34.5	12.4	4.7
	2009	325	88.9	63.7	29.8	12.3	3.1
Agriculture	2010	1413	91.2	71.5	47.3	21.0	6.6
	2009	1249	91.7	72.6	45.0	16.8	5.5
Ancient History	2010	12086	88.9	61.5	35.2	14.8	5.5
	2009	11954	88.3	63.0	37.5	14.3	5.1
Biology	2010	15849	92.6	66.5	35.0	9.9	1.6
	2009	15308	93.2	68.2	35.9	9.7	1.5
Business Studies	2010	15830	90.4	62.8	32.2	9.4	2.0
	2009	15672	91.9	62.2	31.9	10.5	2.3
Chemistry	2010	10330	89.8	60.4	28.4	10.4	3.9
	2009	10041	89.1	61.2	28.6	9.4	3.3
Community & Family Studies	2010	5738	95.3	71.4	35.3	10.7	2.4
	2009	5208	94.1	71.0	35.7	10.9	2.8
Dance	2010	801	88.8	66.0	30.1	4.2	0.9
	2009	763	90.3	64.7	27.7	3.7	0.3
Design & Technology	2010	3599	91.7	65.8	24.8	4.1	0.4
	2009	3632	91.5	65.5	27.8	5.1	0.5
Drama	2010	4492	89.4	60.2	21.7	3.5	0.4
	2009	4772	87.7	52.7	17.9	3.3	0.1
Earth & Environmental Science	2010	1449	92.5	57.6	21.5	4.9	1.2
	2009	1393	92.0	59.3	21.7	4.6	0.6
Economics	2010	6108	86.7	58.6	32.1	15.1	7.1
	2009	6136	86.0	52.8	27.2	12.1	5.2
Engineering Studies	2010	1818	92.0	60.9	23.5	8.5	2.4
	2009	1618	91.1	60.9	25.5	6.2	1.6
English Standard	2010	34371	99.8	95.7	64.9	27.8	8.3
	2009	32454	99.8	94.6	63.8	22.5	7.2
English Advanced	2010	27132	86.0	42.1	7.3	0.9	0.1
	2009	27248	88.7	48.0	11.2	1.0	0.1
English Extension 1	2010	5578	75.5	37.8	14.3	3.3	0.6
	2009	5718	77.5	42.9	15.7	3.7	0.9
English Extension 2	2010	2201	71.9	44.2	18.5	6.0	1.7
	2009	2165	71.8	43.1	20.1	7.4	2.4
ESL	2010	3079	96.3	74.3	35.0	10.4	2.6
	2009	3248	97.3	78.2	43.8	14.4	2.9
Food Technology	2010	3500	92.8	69.9	41.9	19.2	6.9
	2009	3421	91.8	69.4	30.5	8.4	2.1
Geography	2010	4600	91.2	61.5	26.8	7.7	1.3
	2009	4556	88.7	60.1	32.3	10.1	2.5
Industrial Technology	2010	4061	90.5	69.4	40.5	18.3	6.8
	2009	3701	89.3	67.4	38.2	14.3	4.4



Table A4 Distributions of HSC marks by course: 2009 – 2010 (continued)

Course	Year	Number	Percentage of students with HSC mark less than:				
			45	40	35	30	25
Information Processes & Technology	2010	4657	90.2	65.5	34.3	11.8	3.9
	2009	5078	91.7	68.1	34.7	11.2	4.4
Legal Studies	2010	8644	88.4	62.0	35.9	16.6	5.5
	2009	8203	88.0	57.3	32.5	13.3	4.9
General Mathematics	2010	30992	93.4	73.7	43.0	14.0	2.8
	2009	29909	94.1	75.1	45.4	18.4	6.6
Mathematics	2010	17152	80.9	51.8	24.7	10.7	5.1
	2009	17197	84.2	57.4	28.9	10.5	5.2
Mathematics Extension 1	2010	9116	63.0	36.8	17.2	7.6	2.7
	2009	8630	65.5	37.9	18.1	7.6	2.9
Mathematics Extension 2	2010	3469	62.5	27.6	9.8	3.3	1.0
	2009	3170	60.0	29.6	10.5	4.5	1.8
Modern History	2010	10054	91.9	58.1	22.3	8.6	3.4
	2009	9662	90.8	58.9	21.8	6.3	1.4
History Extension	2010	2191	76.8	53.4	29.0	11.3	3.3
	2009	2210	76.6	48.9	26.2	11.8	4.8
Music 1	2010	4995	83.9	39.5	12.1	1.9	0.5
	2009	4882	85.0	42.0	12.5	1.9	0.2
Music 2	2010	747	67.7	17.7	1.1	0.3	0.0
	2009	733	71.9	18.3	2.2	0.3	0.0
Music Extension	2010	447	40.9	9.4	1.1	0.2	0.0
	2009	440	48.2	19.5	5.0	1.1	0.2
PDH&PE	2010	13496	91.0	61.4	29.3	6.5	1.2
	2009	12762	91.5	68.2	39.5	12.5	3.4
Physics	2010	9359	91.6	60.7	28.6	7.2	2.1
	2009	9023	88.5	58.2	31.2	11.6	2.6
Senior Science	2010	4901	91.9	60.0	24.3	6.1	1.0
	2009	4802	92.3	63.6	32.3	7.1	1.6
Society & Culture	2010	3961	91.5	66.5	34.9	10.3	1.7
	2009	3925	93.1	58.4	28.5	9.3	1.4
Software Design & Development	2010	1760	91.5	72.3	39.3	13.6	2.4
	2009	1722	93.3	71.1	37.5	10.2	1.3
Studies of Religion I	2010	9538	86.1	48.8	21.0	5.2	0.9
	2009	9799	88.7	51.3	17.1	3.6	0.6
Studies of Religion II	2010	4468	90.5	50.6	23.0	7.9	1.7
	2009	3950	85.8	47.1	17.2	4.8	0.8
Textiles & Design	2010	2268	85.6	53.7	27.7	9.9	2.3
	2009	2159	86.5	54.5	23.6	5.9	0.6
Visual Arts	2010	9600	88.3	49.3	12.7	1.7	0.2
	2009	9567	87.7	45.9	9.7	1.3	0.2
Arabic Continuers	2010	223	96.4	61.4	22.4	4.5	0.0
	2009	211	97.2	64.5	32.7	9.5	4.3
Arabic Extension	2010	65	92.3	73.8	29.2	7.7	0.0
	2009	59	91.5	64.4	33.9	16.9	5.1

Table A4 Distributions of HSC marks by course: 2009 – 2010 (continued)

Course	Year	Number	Percentage of students with HSC mark less than:				
			45	40	35	30	25
Chinese Continuers	2010	118	56.8	13.6	7.6	0.0	
	2009	131	58.8	16.8	6.1	2.3	0.0
Chinese Background Speakers	2010	1102	88.5	37.2	8.0	1.0	0.2
	2009	1393	90.9	42.4	7.0	0.5	0.0
French Beginners	2010	664	81.2	55.1	27.6	15.5	5.6
	2009	528	83.3	59.7	35.6	11.9	3.4
French Continuers	2010	881	73.2	40.2	14.2	4.2	1.1
	2009	887	73.8	44.2	15.0	3.3	0.9
French Extension	2010	220	54.1	24.1	9.5	2.3	0.0
	2009	216	49.1	18.5	6.9	0.0	
German Beginners	2010	97	79.4	54.6	29.9	11.3	4.1
	2009	85	81.2	48.2	28.2	8.2	1.2
German Continuers	2010	338	76.3	45.0	22.2	5.6	0.9
	2009	330	76.7	50.0	25.8	8.2	2.7
German Extension	2010	93	68.8	40.9	14.0	3.2	2.2
	2009	105	73.3	47.6	26.7	8.6	2.9
Indonesian Continuers	2010	69	66.7	33.3	10.1	2.9	0.0
	2009	77	68.8	33.8	19.5	11.7	0.0
Indonesian Background Speakers	2010	109	99.1	67.9	19.3	4.6	0.9
	2009	98	95.9	68.4	19.4	0.0	
Italian Beginners	2010	357	83.5	63.9	35.6	16.2	6.2
	2009	413	81.1	58.8	29.1	10.7	3.9
Italian Continuers	2010	320	77.2	49.7	21.6	6.3	2.2
	2009	334	79.9	41.9	17.4	3.9	1.8
Italian Extension	2010	60	66.7	35.0	6.7	0.0	
	2009	68	89.7	42.6	5.9	1.5	0.0
Japanese Beginners	2010	663	82.5	56.1	32.0	14.5	5.1
	2009	760	84.9	61.7	37.6	16.8	4.9
Japanese Continuers	2010	781	79.1	51.9	23.2	6.5	1.2
	2009	800	77.5	44.4	22.9	6.8	1.1
Japanese Extension	2010	285	74.0	40.4	17.9	6.0	1.1
	2009	283	73.9	43.1	20.1	6.4	1.4
Korean Background Speakers	2010	88	76.1	28.4	5.7	0.0	
	2009	93	76.3	25.8	4.3	1.1	0.0
Latin Continuers	2010	176	46.0	19.3	4.5	0.0	
	2009	184	35.3	10.9	2.2	0.0	
Latin Extension	2010	97	22.7	3.1	0.0		
	2009	102	25.5	6.9	2.9	1.0	1.0
Modern Greek Beginners	2010	48	62.5	45.8	22.9	12.5	2.1
	2009	44	70.5	38.6	18.2	6.8	4.5
Modern Greek Continuers	2010	97	78.4	49.5	20.6	3.1	0.0
	2009	115	85.2	40.0	8.7	5.2	1.7
Spanish Beginners	2010	213	85.0	63.4	30.0	15.0	1.9
	2009	124	83.1	62.9	37.1	21.8	11.3

Table A4 Distributions of HSC marks by course: 2009 – 2010 (continued)

Course	Year	Number	Percentage of students with HSC mark less than:				
			45	40	35	30	25
Spanish Continuers	2010	166	81.3	44.0	10.2	0.0	
	2009	190	90.0	34.7	7.9	0.0	
Spanish Extension	2010	46	93.5	63.0	28.3	0.0	
	2009	71	88.7	50.7	7.0	1.4	0.0
Vietnamese	2010	181	97.8	71.3	26.0	6.6	2.8
	2009	162	98.1	63.6	17.9	7.4	2.5
Accounting	2010	530	85.8	53.6	32.1	18.5	9.1
	2009	497	84.7	54.5	31.2	10.5	2.4
Automotive Exam	2010	282	100.0	83.3	42.6	5.0	1.1
	2009	293	99.0	76.8	36.9	7.9	1.4
Business Services Exam	2010	1462	95.9	77.6	36.0	8.7	1.9
	2009	1397	98.5	81.7	37.2	9.2	2.1
Construction Exam	2010	1536	98.9	78.9	31.5	8.1	0.5
	2009	1395	99.5	87.4	45.2	11.8	1.1
Electrotechnology Exam	2010	172	95.3	66.9	35.5	9.3	0.6
	2009	135	97.0	72.6	27.4	4.4	0.0
Entertainment Exam	2010	828	95.7	77.1	33.1	5.4	0.5
	2009	846	95.4	77.3	40.2	13.8	3.5
Hospitality Exam	2010	5150	94.3	64.2	24.2	6.4	0.9
	2009	5362	95.3	69.5	27.5	5.7	0.8
Information Technology Exam	2010	1598	98.1	77.7	33.9	10.8	1.1
	2009	1655	98.9	81.7	45.3	13.8	3.4
Metal & Engineering Exam	2010	671	97.6	81.7	43.1	14.8	4.2
	2009	648	97.8	80.1	40.0	15.3tt	5.1
Primary Industries Exam	2010	578	97.2	81.3	26.8	4.7	0.0
	2009	506	96.4	74.9	31.8	4.2	0.2
Retail Services Exam	2010	954	98.8	78.6	30.1	4.4	0.6
	2009	1112	98.7	76.7	26.9	3.9	0.4
Tourism & Events Exam	2010	349	95.7	65.0	26.4	6.0	0.6
	2009	312	96.8	71.2	22.8	1.9	0.0
Philosophy Distinction	2010	53	88.7	20.8	0.0		
	2009	45	73.3	6.7	0.0		

**Table A5 Distributions of scaled marks by course: 2009 – 2010**

- Notes: (i) Columns **45, 40, 35, 30, 25, 20 and 15** show the percentage of the course candidature with a scaled mark less than the specified mark.
- (ii) The table excludes courses with less than 40 students in either year.

Course	Year	Number	Percentage of students with scaled mark less than:						
			45	40	35	30	25	20	15
Aboriginal Studies	2010	339	100.0	95.0	92.6	85.3	76.1	68.7	57.2
	2009	325	100.0	98.8	92.9	86.2	77.2	70.2	55.7
Agriculture	2010	1413	98.8	94.1	87.0	77.4	65.3	52.7	35.5
	2009	1249	99.4	95.4	89.0	79.2	64.9	50.3	33.6
Ancient History	2010	12086	98.7	92.8	81.1	65.7	49.4	33.8	20.5
	2009	11954	99.1	92.5	79.6	64.0	48.8	34.3	21.4
Biology	2010	15849	99.1	91.9	77.2	58.4	40.3	24.8	13.2
	2009	15308	99.2	92.7	77.7	58.7	40.7	25.5	13.5
Business Studies	2010	15830	99.7	94.9	83.9	69.3	53.3	38.0	23.9
	2009	15672	99.3	94.4	84.0	69.7	54.2	37.6	23.0
Chemistry	2010	10330	97.9	80.6	56.6	36.4	22.1	12.4	6.3
	2009	10041	97.2	80.9	58.5	38.1	23.0	13.0	6.1
Community & Family Studies	2010	5738	100.0	98.3	92.4	82.3	68.8	52.6	35.3
	2009	5208	100.0	98.0	91.6	81.4	67.2	51.6	34.9
Dance	2010	801	99.9	94.1	86.0	75.5	60.5	41.3	21.8
	2009	763	99.5	96.5	87.0	76.3	60.4	40.4	22.8
Design & Technology	2010	3599	99.6	95.4	87.9	76.7	63.5	47.5	29.4
	2009	3632	99.7	96.1	88.7	78.1	63.7	47.2	29.4
Drama	2010	4492	98.6	92.9	83.5	69.7	52.1	34.7	20.2
	2009	4772	98.6	93.0	82.6	68.0	50.4	33.6	19.3
Earth & Environmental Science	2010	1449	99.4	95.6	83.4	65.9	48.2	30.3	17.9
	2009	1393	99.6	94.3	84.0	67.4	49.2	32.4	17.5
Economics	2010	6108	97.9	82.3	59.8	39.2	24.2	14.5	8.1
	2009	6136	96.8	81.6	60.5	41.0	26.3	16.0	9.6
Engineering Studies	2010	1818	99.4	96.0	84.1	66.2	46.1	27.6	13.9
	2009	1618	99.2	92.6	81.6	66.5	46.0	28.2	13.4
English Standard	2010	34371	99.9	99.7	98.4	94.0	83.4	64.4	40.6
	2009	32454	99.9	99.6	97.7	92.3	80.1	61.1	37.4
English Advanced	2010	27132	96.5	80.2	58.8	35.9	18.1	7.1	2.0
	2009	27248	96.6	82.9	63.8	41.0	22.7	9.9	3.0
English Extension 1	2010	5578	96.7	69.7	35.2	14.2	4.9	1.3	0.3
	2009	5718	95.6	67.7	36.0	15.0	6.0	2.6	0.8
English Extension 2	2010	2201	92.9	70.2	41.6	14.9	4.0	0.9	0.2
	2009	2165	90.3	68.0	38.3	16.6	6.0	2.0	0.6
ESL	2010	3079	98.5	93.2	84.9	73.5	58.8	44.5	30.3
	2009	3248	99.4	95.0	86.4	76.0	61.9	48.3	35.3
Food Technology	2010	3500	99.9	96.9	89.5	78.5	65.7	51.5	35.7
	2009	3421	99.7	96.1	88.8	78.5	65.0	50.1	33.4
Geography	2010	4600	98.5	91.7	79.7	64.8	46.4	30.8	17.8
	2009	4556	98.7	91.8	79.3	63.8	47.3	30.9	17.7
Industrial Technology	2010	4061	100.0	99.9	96.5	88.6	78.4	65.2	48.6
	2009	3701	100.0	99.9	96.0	88.3	78.0	64.3	47.6

Table A5 Distributions of scaled marks by course: 2009 – 2010 (continued)

Course	Year	Number	Percentage of students with scaled mark less than:						
			45	40	35	30	25	20	15
Information Processes & Technology	2010	4657	99.7	96.1	87.2	74.3	59.1	44.4	28.5
	2009	5078	99.9	97.1	89.2	77.2	61.2	45.3	30.2
Legal Studies	2010	8644	98.7	90.5	78.1	63.2	47.1	32.5	20.5
	2009	8203	98.8	91.4	78.8	62.7	46.0	31.6	19.5
General Mathematics	2010	30992	99.9	98.3	90.0	77.6	63.0	47.4	31.5
	2009	29909	99.9	98.0	90.3	77.8	63.0	47.2	30.9
Mathematics	2010	17152	97.3	82.6	62.9	42.2	25.4	14.3	7.2
	2009	17197	96.5	83.2	64.6	44.7	27.3	14.9	7.4
Mathematics Extension 1	2010	9116	76.9	41.9	19.3	9.3	4.2	1.8	0.7
	2009	8630	70.6	37.7	19.3	10.1	5.2	2.7	1.3
Mathematics Extension 2	2010	3469	52.6	14.1	4.6	1.8	0.7	0.4	0.2
	2009	3170	39.3	10.7	4.2	1.7	0.5	0.2	0.0
Modern History	2010	10054	98.7	90.7	74.4	55.2	37.5	24.3	14.6
	2009	9662	97.8	89.4	73.5	54.6	37.8	24.2	14.2
History Extension	2010	2191	97.4	80.1	50.8	22.5	7.4	2.1	0.7
	2009	2210	98.2	83.1	54.4	25.8	9.0	2.4	0.5
Music 1	2010	4995	99.6	95.2	87.0	75.5	60.6	43.0	25.5
	2009	4882	99.3	94.9	87.7	76.6	61.7	43.5	25.9
Music 2	2010	747	94.2	77.2	54.9	30.5	15.9	5.1	0.9
	2009	733	93.6	77.2	59.8	35.9	15.6	5.6	1.9
Music Extension	2010	447	85.0	73.8	55.0	24.8	6.9	1.1	0.2
	2009	440	86.8	72.7	51.8	30.2	11.1	3.4	1.1
PDH&PE	2010	13496	99.7	95.7	85.9	71.7	55.4	39.2	24.5
	2009	12762	99.6	94.9	84.9	71.3	55.8	39.6	23.9
Physics	2010	9359	98.3	85.3	63.5	42.2	26.1	15.1	7.5
	2009	9023	97.5	82.7	62.8	43.6	28.4	16.3	8.0
Senior Science	2010	4901	100.0	98.7	93.4	83.8	68.6	51.9	36.0
	2009	4802	100.0	98.6	93.6	83.4	68.9	52.3	34.5
Society & Culture	2010	3961	98.8	93.3	83.5	71.0	55.5	38.8	22.5
	2009	3925	98.5	93.6	84.5	70.4	53.6	37.0	22.9
Software Design & Development	2010	1760	99.4	94.5	83.8	67.8	48.7	34.1	19.1
	2009	1722	99.4	94.8	84.0	67.1	48.7	32.7	18.7
Studies of Religion I	2010	9538	99.7	94.3	78.8	58.8	37.3	20.9	9.6
	2009	9799	99.2	93.1	79.1	60.3	38.7	20.9	9.0
Studies of Religion II	2010	4468	98.5	90.6	75.4	55.8	37.4	22.9	12.9
	2009	3950	98.1	90.0	74.3	56.1	37.3	22.5	11.5
Textiles & Design	2010	2268	99.2	94.8	85.6	73.9	59.3	42.8	27.5
	2009	2159	99.6	95.1	87.0	74.5	58.5	42.7	26.0
Visual Arts	2010	9600	98.4	93.3	84.5	72.3	57.2	41.8	25.0
	2009	9567	98.7	93.2	84.2	72.5	59.0	42.0	25.5
Arabic Continuers	2010	223	100.0	97.3	93.3	84.8	70.0	58.7	42.2
	2009	211	100.0	97.6	93.8	84.4	74.4	61.1	42.7
Arabic Extension	2010	65	100.0	96.9	89.2	75.4	52.3	15.4	6.2
	2009	59	100.0	98.3	91.5	79.7	54.2	30.5	16.9

Table A5 Distributions of scaled marks by course: 2009 – 2010 (continued)

Course	Year	Number	Percentage of students with scaled mark less than:						
			45	40	35	30	25	20	15
Chinese Continuers	2010	118	94.9	75.4	51.7	36.4	22.9	11.9	9.3
	2009	131	92.4	77.9	54.2	36.6	22.9	13.0	6.1
Chinese Background Speakers	2010	1102	98.2	94.6	87.4	74.7	61.5	46.1	30.6
	2009	1393	99.3	95.6	87.9	79.2	68.5	54.9	38.8
French Beginners	2010	664	97.9	92.3	80.3	64.6	45.9	28.8	18.4
	2009	528	97.9	91.5	79.7	65.2	47.2	30.5	15.2
French Continuers	2010	881	91.6	68.1	44.9	26.3	14.4	5.8	2.7
	2009	887	91.9	72.9	50.7	30.3	16.0	6.5	2.4
French Extension	2010	220	76.4	40.0	15.5	5.0	1.4	0.0	
	2009	216	78.2	36.1	13.0	3.7	0.0		
German Beginners	2010	97	95.9	85.6	69.1	53.6	37.1	23.7	9.3
	2009	85	94.1	81.2	71.8	52.9	43.5	28.2	17.6
German Continuers	2010	338	92.0	73.1	51.2	34.3	20.1	7.7	4.1
	2009	330	89.4	70.6	50.6	33.9	20.0	7.9	2.7
German Extension	2010	93	90.3	59.1	16.1	2.2	2.2	0.0	
	2009	105	90.5	55.2	25.7	5.7	1.9	0.0	
Indonesian Continuers	2010	69	92.8	81.2	53.6	37.7	20.3	10.1	2.9
	2009	77	90.9	74.0	61.0	37.7	24.7	14.3	11.7
Indonesian Background Speakers	2010	109	97.2	84.4	78.0	54.1	33.9	22.0	11.0
	2009	98	95.9	88.8	69.4	51.0	27.6	9.2	1.0
Italian Beginners	2010	357	94.7	87.4	80.1	63.0	48.5	32.2	19.0
	2009	413	97.1	86.2	78.5	64.6	48.2	31.7	15.3
Italian Continuers	2010	320	94.4	85.3	67.8	47.8	30.9	13.8	6.3
	2009	334	96.7	88.6	74.0	55.4	32.6	20.4	7.8
Italian Extension	2010	60	88.3	68.3	31.7	5.0	0.0		
	2009	68	94.1	66.2	25.0	5.9	1.5	0.0	
Japanese Beginners	2010	663	99.7	93.4	81.0	67.0	50.1	34.5	22.2
	2009	760	98.8	92.6	82.6	66.2	52.6	38.7	24.9
Japanese Continuers	2010	781	94.1	77.1	58.8	41.0	25.5	12.8	5.3
	2009	800	93.8	78.1	57.3	38.0	26.4	14.8	6.8
Japanese Extension	2010	285	94.4	63.5	24.2	7.7	2.1	0.0	
	2009	283	95.4	67.5	30.0	8.5	2.1	0.0	
Korean Background Speakers	2010	88	98.9	97.7	81.8	72.7	52.3	30.7	19.3
	2009	93	95.7	89.2	80.6	65.6	51.6	38.7	25.8
Latin Continuers	2010	176	78.4	46.0	25.6	8.5	4.5	0.6	0.0
	2009	184	78.3	41.3	23.9	10.3	3.3	2.2	0.0
Latin Extension	2010	97	66.0	32.0	14.4	4.1	3.1	1.0	0.0
	2009	102	63.7	36.3	13.7	4.9	3.9	2.0	1.0
Modern Greek Beginners	2010	48	97.9	93.8	70.8	60.4	54.2	31.3	20.8
	2009	44	93.2	88.6	75.0	70.5	59.1	40.9	29.5
Modern Greek Continuers	2010	97	93.8	84.5	75.3	64.9	49.5	29.9	14.4
	2009	115	98.3	93.9	86.1	67.8	49.6	30.4	14.8
Spanish Beginners	2010	213	95.8	88.3	77.9	69.5	56.3	39.4	23.0
	2009	124	95.2	85.5	76.6	63.7	51.6	33.1	21.8

Table A5 Distributions of scaled marks by course: 2009 – 2010 (continued)

Course	Year	Number	Percentage of students with scaled mark less than:						
			45	40	35	30	25	20	15
Spanish Continuers	2010	166	98.2	95.2	83.7	76.5	63.3	44.6	24.7
	2009	190	99.5	93.2	82.6	71.6	51.6	33.7	17.9
Spanish Extension	2010	46	97.8	95.7	71.7	50.0	23.9	4.3	0.0
	2009	71	97.2	90.1	73.2	50.7	23.9	5.6	1.4
Vietnamese	2010	181	98.9	94.5	88.4	77.3	68.0	51.9	37.0
	2009	162	98.1	95.1	84.0	76.5	64.2	46.9	30.9
Accounting	2010	530	93.2	77.5	62.8	46.0	33.4	24.2	17.2
	2009	497	94.4	81.7	66.4	52.3	41.7	27.6	15.5
Automotive Exam	2010	282			100.0	92.9	86.9	79.8	65.6
	2009	293		100.0	99.3	94.2	87.0	76.8	62.1
Business Services Exam	2010	1462	100.0	99.7	94.5	86.9	72.6	57.9	39.4
	2009	1397	100.0	99.1	95.1	87.9	73.4	56.3	39.9
Construction Exam	2010	1536		100.0	98.3	92.8	81.6	67.8	51.2
	2009	1395		100.0	97.8	92.1	82.9	69.4	52.7
Electrotechnology Exam	2010	172		100.0	95.3	87.8	76.7	60.5	42.4
	2009	135		100.0	98.5	90.4	80.7	65.2	43.7
Entertainment Exam	2010	828	100.0	97.5	90.0	79.8	65.8	45.9	29.0
	2009	846	100.0	98.3	92.6	83.2	64.9	46.6	28.0
Hospitality Exam	2010	5150	100.0	99.1	92.5	83.7	67.9	52.4	32.4
	2009	5362	100.0	98.1	92.7	82.6	69.5	51.2	33.5
Information Technology Exam	2010	1598	100.0	99.9	96.3	86.9	72.7	55.3	36.1
	2009	1655	100.0	99.6	96.3	87.4	69.1	52.6	33.4
Metal & Engineering Exam	2010	671		100.0	99.0	93.4	84.2	70.3	53.9
	2009	648		100.0	98.8	93.7	81.5	70.5	52.2
Primary Industries Exam	2010	578	100.0	99.7	95.8	88.9	76.0	64.5	46.4
	2009	506		100.0	96.4	88.9	78.5	62.3	43.9
Retail Services Exam	2010	954	100.0	99.9	96.4	89.2	78.6	64.8	49.2
	2009	1112	100.0	99.8	96.3	88.1	76.7	64.6	44.6
Tourism & Events Exam	2010	349	100.0	99.7	94.0	81.7	67.6	51.9	35.5
	2009	312	100.0	97.8	91.3	81.4	66.3	42.9	22.8
Philosophy Distinction	2010	53	90.6	62.3	3.8	0.0			
	2009	45	68.9	48.9	13.3	6.7	2.2	0.0	

**Table A6 Courses that contribute to the ATAR**

- Notes: (i) This table shows the percentage of the course candidature who completed more than 10 units of ATAR courses for whom **all** units of that course contributed to their ATAR.
- (ii) The **Number receiving ATAR** column shows the number of students who did the course in 2010 or a previous year, and received an ATAR in 2010.
- (iii) The **ATAR students with > 10 units** columns show the number and percentage of ATAR students who completed more than 10 units of ATAR courses.
- (iv) The **Percentage who counted course** column shows the percentage of ATAR students who completed more than 10 units of ATAR courses for whom all units of that course contributed towards their ATAR.
- (v) The table excludes courses with less than 10 students.

Course	Number receiving ATAR	ATAR students with > 10 units		Percentage who counted course
		Number	Percentage	
Aboriginal Studies	194	41	21	73
Agriculture	1079	475	44	78
Ancient History	11149	5093	46	85
Biology	15308	7819	51	82
Business Studies	14568	6171	42	86
Chemistry	10272	6856	67	75
Community & Family Studies	4507	1532	34	89
Dance	705	252	36	66
Design & Technology	3100	1248	40	74
Drama	3972	1531	39	74
Earth & Environmental Science	1334	623	47	79
Economics	6056	3678	61	77
Engineering Studies	1747	950	54	71
English Standard	24838	8243	33	100
English Advanced	26644	14996	56	99
English Extension 1	5566	4040	73	86
English Extension 2	2205	1451	66	82
ESL	2739	963	35	100
Food Technology	2786	1007	36	86
Geography	4328	2080	48	83
Industrial Technology	2611	861	33	67
Information Processes & Technology	4251	2043	48	77
Legal Studies	8161	3799	47	85
General Mathematics	26077	9344	36	71
Mathematics	16246	10235	63	71
Mathematics Extension 1	8974	6968	78	91
Mathematics Extension 2	3452	2104	61	99
Modern History	9514	4763	50	83
History Extension	2194	1815	83	82
Music 1	4295	1720	40	61
Music 2	735	563	77	69
Music Extension	448	368	82	68
PDH&PE	12050	4881	41	86
Physics	9269	5920	64	74
Senior Science	4049	1497	37	85
Society & Culture	3576	1238	35	88
Software Design & Development	1659	874	53	71



Table A6 Courses that contribute to the ATAR (continued)

Course	Number receiving ATAR	ATAR students with > 10 units		Percentage who counted course
		Number	Percentage	
Studies of Religion I	9149	8330	91	80
Studies of Religion II	4299	1824	42	83
Textiles & Design	1875	616	33	82
Visual Arts	8195	3158	39	73
Arabic Continuers	199	100	50	69
Arabic Extension	64	54	84	89
Armenian	24	19	79	74
Chinese Beginners	40	12	30	50
Chinese Continuers	115	74	64	61
Chinese Extension	35	31	89	84
Chinese Background Speakers	1043	367	35	68
Classical Greek Continuers	12	10	83	70
Classical Greek Extension	12	10	83	70
Classical Hebrew Continuers	37	26	70	73
Classical Hebrew Extension	21	17	81	88
Croatian	18	12	67	58
Filipino	11	6	55	83
French Beginners	611	236	39	81
French Continuers	862	616	71	70
French Extension	209	169	81	93
German Beginners	96	51	53	61
German Continuers	331	227	69	65
German Extension	98	84	86	87
Hindi	25	21	84	33
Indonesian Beginners	51	20	39	70
Indonesian Continuers	66	46	70	63
Indonesian Extension	21	19	90	79
Indonesian Background Speakers	95	57	60	47
Italian Beginners	315	169	54	72
Italian Continuers	309	209	68	64
Italian Extension	59	44	75	84
Japanese Beginners	635	229	36	75
Japanese Continuers	779	497	64	61
Japanese Extension	285	219	77	84
Japanese Background Speakers	36	9	25	33
Khmer	21	13	62	46
Korean Background Speakers	88	26	30	77
Latin Continuers	173	157	91	68
Latin Extension	96	88	92	75
Macedonian	30	19	63	68
Modern Greek Beginners	43	17	40	71
Modern Greek Continuers	91	73	80	55
Modern Greek Extension	37	36	97	75
Modern Hebrew	40	26	65	58
Persian	35	12	34	67

Table A6 Courses that contribute to the ATAR (continued)

Course	Number receiving ATAR	ATAR students with > 10 units		Percentage who counted course
		Number	Percentage	
Polish	30	21	70	62
Portuguese	16	11	69	73
Russian	18	11	61	55
Serbian	18	12	67	92
Spanish Beginners	185	75	41	75
Spanish Continuers	152	97	64	63
Spanish Extension	48	40	83	90
Tamil	28	21	75	62
Turkish	33	18	55	67
Vietnamese	158	78	49	72
Accounting	506	302	60	67
Automotive Exam	127	46	36	48
Business Services Exam	1129	432	38	77
Construction Exam	942	333	35	77
Electrotechnology Exam	112	36	32	58
Entertainment Exam	670	238	36	76
Hospitality Exam	4343	1613	37	78
Information Technology Exam	1315	500	38	69
Metal & Engineering Exam	378	135	36	64
Primary Industries Exam	366	146	40	79
Retail Services Exam	651	227	35	67
Tourism & Events Exam	279	84	30	71
Philosophy Distinction	43	43	100	37

**Table A7 ATAR distribution**

- Notes: (i) This table shows the number of students receiving each ATAR from 99.95 to 99.00 and the number corresponding to the stated ATAR ranges down to 30.00–30.95
- (ii) The median ATAR in 2010 was 69.80

ATAR	Number	Number on or above	Percentage on or above
99.95	49	49	0.1
99.90	49	98	0.2
99.85	46	144	0.3
99.80	44	188	0.3
99.75	47	235	0.4
99.70	48	283	0.5
99.65	50	333	0.6
99.60	45	378	0.7
99.55	50	428	0.8
99.50	43	471	0.9
99.45	48	519	1.0
99.40	51	570	1.1
99.35	43	613	1.1
99.30	49	662	1.2
99.25	50	712	1.3
99.20	45	757	1.4
99.15	46	803	1.5
99.10	46	849	1.6
99.05	50	899	1.7
99.00	46	945	1.7
99.00 – 99.95	945	945	1.7
98.00 – 98.95	938	1883	3.5
97.00 – 97.95	933	2816	5.2
96.00 – 96.95	925	3741	6.9
95.00 – 95.95	941	4682	8.6
94.00 – 94.95	945	5627	10.4
93.00 – 93.95	924	6551	12.1
92.00 – 92.95	939	7490	13.8
91.00 – 91.95	922	8412	15.5
90.00 – 90.95	916	9328	17.2
89.00 – 89.95	910	10238	18.9
88.00 – 88.95	919	11157	20.6
87.00 – 87.95	922	12079	22.3
86.00 – 86.95	925	13004	24.0
85.00 – 85.95	915	13919	25.7
84.00 – 84.95	886	14805	27.3
83.00 – 83.95	910	15715	29.0
82.00 – 82.95	886	16601	30.6
81.00 – 81.95	900	17501	32.3
80.00 – 80.95	882	18383	33.9
79.00 – 79.95	890	19273	35.5
78.00 – 78.95	866	20139	37.1

Table A7 ATAR distribution (continued)

ATAR	Number	Number on or above	Percentage on or above
77.00 – 77.95	879	21018	38.8
76.00 – 76.95	857	21875	40.3
75.00 – 75.95	857	22732	41.9
74.00 – 74.95	847	23579	43.5
73.00 – 73.95	869	24448	45.1
72.00 – 72.95	857	25305	46.7
71.00 – 71.95	818	26123	48.2
70.00 – 70.95	830	26953	49.7
69.00 – 69.95	830	27783	51.2
68.00 – 68.95	812	28595	52.7
67.00 – 67.95	778	29373	54.2
66.00 – 66.95	765	30138	55.6
65.00 – 65.95	800	30938	57.1
64.00 – 64.95	797	31735	58.5
63.00 – 63.95	736	32471	59.9
62.00 – 62.95	745	33216	61.3
61.00 – 61.95	748	33964	62.6
60.00 – 60.95	729	34693	64.0
59.00 – 59.95	719	35412	65.3
58.00 – 58.95	676	36088	66.6
57.00 – 57.95	686	36774	67.8
56.00 – 56.95	686	37460	69.1
55.00 – 55.95	658	38118	70.3
54.00 – 54.95	668	38786	71.5
53.00 – 53.95	630	39416	72.7
52.00 – 52.95	629	40045	73.9
51.00 – 51.95	632	40677	75.0
50.00 – 50.95	593	41270	76.1
49.00 – 49.95	592	41862	77.2
48.00 – 48.95	579	42441	78.3
47.00 – 47.95	567	43008	79.3
46.00 – 46.95	550	43558	80.3
45.00 – 45.95	556	44114	81.4
44.00 – 44.95	526	44640	82.3
43.00 – 43.95	493	45133	83.2
42.00 – 42.95	503	45636	84.2
41.00 – 41.95	470	46106	85.0
40.00 – 40.95	478	46584	85.9
39.00 – 39.95	444	47028	86.7
38.00 – 38.95	440	47468	87.5
37.00 – 37.95	397	47865	88.3
36.00 – 36.95	399	48264	89.0
35.00 – 35.95	373	48637	89.7
34.00 – 34.95	377	49014	90.4
33.00 – 33.95	357	49371	91.1
32.00 – 32.95	343	49714	91.7
31.00 – 31.95	314	50028	92.3
30.00 – 30.95	315	50343	92.8

**Table A8 Relationship between ATAR and percentiles: 2009–2010**

Note: This table shows the ATAR at selected percentiles of the ATAR cohort.

Percentile	ATAR 2009	ATAR 2010
100	99.95	99.95
99	99.40	99.40
98	98.85	98.80
95	97.15	97.10
90	94.35	94.20
85	91.50	91.30
80	88.60	88.30
75	85.70	85.35
70	82.75	82.35
60	76.70	76.20
50	70.25	69.80
40	63.30	62.85
30	55.50	55.25

**Table A9 Relationship between ATAR and aggregates: 2009–2010**

Note: This table shows the lowest aggregate of scaled marks corresponding to each of the selected ATARs.

ATAR	Lowest aggregate	
	2009	2010
99.95	478.9	476.2
99.50	457.7	455.2
99.00	446.6	444.8
98.00	431.3	430.0
95.00	401.5	403.0
90.00	367.4	369.6
85.00	340.0	341.5
80.00	315.1	317.6
75.00	292.4	295.5
70.00	271.0	273.4
65.00	250.4	252.5
60.00	231.1	231.7
55.00	212.1	211.6
50.00	193.1	192.4



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