



Qualifications and
Curriculum Authority

Evaluation of participation in GCE mathematics

Appendices A – D

QCA Research Faculty

November 2007

QCA/07/3388

Appendix A

Matched candidate results analysis 2006

This extends the analysis carried out in 2005, which reviewed data from prior to the implementation of Curriculum 2000 (C2K) until 2004. This report extends the time series to include the 2005 and 2006 cohort data, as well as providing an additional breadth to the subject comparisons drawn in the earlier report, by including two newer AS and A level subjects: media and psychology. This addition was a recommendation both from the project team, and from the Department for Education and Skills (DfES) Advisory Board, and is intended to provide illustration of the impact of Curriculum 2000 changes on less established subjects.

As before, figures are analysed in relation to the national cohort and AS and A level cohorts, to provide a picture of the proportions of young people taking mathematics AS and A level awards. The change of cohort size over the years can be considerable, for example the total number of young people aged 15 at 31 August has varied considerably over the years 2001–6, from a low of 598,099 in 2001 to a high in 2006 of 671,185 a difference of 73,086 (or 12.2% of 2001 total). Therefore just looking at numbers of entries over time does not accurately represent the proportions of young people taking mathematics.

Analysis of results data using matched candidate databases

These analyses are based on matched candidate data. This means that there is information at student level about their previous performance in GCSE examinations, as well as in other GCE awards.

We have matched candidate data from the DfES for the following years:

- 2001
- 2002
- 2003
- 2004
- 2005
- 2006.

This gives us one cohort of students completing the old GCE mathematics (2001), it will also provides six cohorts of Curriculum 2000 AS students (2001–6), as well as five cohorts of Curriculum 2000 A level students (2002–6). We have not included legacy AS material in the matched candidate information since the AS has changed its purpose and nature between the legacy and Curriculum 2000 version. Prior to Curriculum 2000 the AS was 'Advanced Supplementary', intended to provide extra challenge, whereas the Curriculum 2000 AS is

'Advanced Subsidiary' and forms the first half of the full A level. Numbers of students involved in the Advanced Supplementary were comparatively small. Comparisons between cohorts undertaking the different types of award would not be illuminating.

2001	Legacy A level	C2K AS	
2002		C2K AS	C2K A level
2003		C2K AS	C2K A level
2004		C2K AS	C2K A level
2005		C2K AS	C2K A level
2006		C2K AS	C2K A level

This means we will be able to consider the impact of Curriculum 2000 over time, by comparing results for different years. The specifications launched in September 2004 in mathematics show up in the AS results for 2005 and 2006, as well as in the A level results for 2006.

In addition to information about mathematics A and AS, we have also looked at figures for English, physics, geography, media and psychology to provide comparison points. This allows us to see where there are differences between the different subjects, and to identify whether any is particularly different to the others.

Information about the data used in this analysis

1. *Removal of general studies AS and A level results*

There is a consensus that general studies AS and A level does not have the same value as other A levels, and that in practice its offer and delivery are very variable, depending on centre policy. In order to remove this aspect of variation in the data these results have been removed.

2. *Students in the AS and A level cohort were divided into AS or A level students.*

AS level students are those students who have not taken a full A level. A level students may have taken a stand-alone AS as well as their full A levels.

3. *A level students are students who have taken at least one GCE or Vocational Certificate of Education (VCE), whether or not they achieved an award – therefore results include U grades.*

4. *AS and A level includes VCE and GCE, but not Advanced General National Vocational Qualification (GNVQ).*

5. Average GCSE score is based upon full and short GCSE courses only i.e. not GNVQ
6. Numbers achieving A levels in the cohort is at any time, even if in year 12 or before.
7. When calculating AS and A level mathematics numbers, all of the following titles are aggregated at each level.

Mathematics

AS level

- AS mathematics
- AS pure mathematics
- AS applied mathematics
- AS statistics
- AS mechanics
- AS discrete mathematics.

A level

- A level mathematics
- A level pure mathematics
- A level applied mathematics (legacy only)
- A level statistics (legacy only)
- A level mechanics (legacy only)
- A level discrete mathematics (legacy only).

Further mathematics is excluded from the AS and A level mathematics total, and treated separately. Further mathematics is:

- AS further mathematics
- A level further mathematics.

English

In the case of English, like mathematics, the various types have been aggregated and counted as either AS level or A level:

AS level

- AS English language
- AS English literature
- AS English language & literature.

A level

- A level English language

- A level English literature
- A level English language & literature.

Physics

AS level

- AS physics.

A level

- A level physics

Geography

AS level

- AS level geography.

A level

- A level geography.

Media

AS level

- AS media

A level

- A level media.

Psychology

In the case of psychology, like mathematics and English, the various types (psychology as science and psychology as social science) have been aggregated and counted as either AS or A level:

AS level

- AS psychology as science
- AS psychology as social science.

A level

- A level psychology as science
- A level psychology as social science.

Analyses

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Cohort sizes

The cohort is the national group of people who meet a particular specification. In the case of these analyses:

Total national cohort is those young people in England aged 17 on 31 August prior to the June examination (i.e. for the 2004 results, the young people would have been 17 on 31 August 2003).

AS only cohort is those young people in England aged 17 on 31 August prior to the June examination taking at least one AS award and no A level awards.

A level cohort is those young people in England aged 17 on 31 August prior to the June examination taking at least one A level award.

The total A/AS cohort is the sum of the AS only cohort and the A level cohort.

Table 1: Cohort sizes

	2001	2002	2003	2004	2005	2006
Total national cohort *	598,099	613,076	639,969	636,656	655,248	671,185
AS only cohort	22,423	41,238	45,619	46,396	46,156	49,079
AS only cohort as % of total population	3.7%	6.7%	7.1%	7.3%	7.0%	7.3%
A level cohort	205,930	228,161	237,367	235,107	236,194	238,398
A level cohort as % total population	34.4%	37.2%	37.1%	36.9%	36.0%	35.5%
Total A/AS cohort	228,353	269,399	282,986	281,503	282,350	287,477
A/AS cohort as % of total population	38.1%	43.9%	44.2%	44.2%	43.1%	43.8%

*Estimated population in England at 1 January – for males and females aged 17 on previous 31 August. The data for 2004–6 are projections using the Government Actuary's Department 2003 base projections.

There has been a significant increase in the proportion of the cohort taking A and AS qualifications since 2001, and the introduction of Curriculum 2000, from 38.1% in 2001 to 43.2% in 2006, a slight decline from the 2003–4 high of 44.2%. The most striking increase is the proportion taking AS only, which has almost doubled from 3.7% to 7.3%.

Numbers of mathematics A levels taken as a percentage of all A levels taken.

Table 2: A levels taken (excluding AS)

Total numbers of A levels taken per year are as follows:

	2001	2002	2003	2004	2005	2006
All A levels	549,873	592,350	613,438	615,470	628,116	647,538

Percentage distribution by subjects

	2001 %	2002 %	2003 %	2004 %	2005 %	2006 %
All A levels	100	100	100	100	100	100
Mathematics	9.0	6.8	6.6	6.7	6.5	6.9
Further mathematics	0.9	0.7	0.7	0.7	0.7	0.9
English	12.5	11.5	10.9	10.8	11.2	11.0
Physics	4.7	4.4	4.0	3.7	3.5	3.3
Geography	5.8	5.1	4.9	4.6	4.3	4.2
Media	0.0	2.3	2.5	2.6	2.5	2.7
Psychology	0.4	4.2	4.8	5.3	5.6	6.0

In this table all subjects that we used for the original comparisons dropped their share of the total A levels taken to a greater or lesser extent, mathematics took the most severe drop of all subjects considered, a total of 2.1 percentage points, compared with 1.5 in English, 1.4 in physics and 1.6 in geography. Mathematics did show, within this figure, an improvement in 2006, in contrast to both physics and geography which have shown continual decline in this time.

A view of the additional comparators, media and psychology, shows a picture of continued increase in share over time, from 0 to 2.7 in media, and a very impressive 0.4 to 6.0 for psychology, a larger share than either physics or geography.

The inclusion of these new subjects illustrates, to some extent, the gains of new subjects at the expense of the old.

Table 3: Further Mathematics A levels taken as a proportion of mathematics A levels taken

2001	2002	2003	2004	2005	2006
9.6%	10.3%	10.4%	10.6%	10.9%	12.7%

In the interim report we noted a 1% increase in the proportion of A level mathematicians taking further mathematics and speculated that the decrease in mathematicians had been at the less able end of the spectrum with more able mathematicians who also take further mathematics representing a larger proportion. This was supported by data showing that there had been a slight increase in the average GCSE point score of mathematics A level students over time that did not hold true for further mathematicians. We have seen, in the period 2005-2006 a big increase in the proportion of A level mathematicians taking A levels in further mathematics, from 10.9% to 12.7%.

Numbers of students taking A level mathematics as a percentage of the total A level cohort

Table 4: Numbers of students taking A levels (exc. AS only)

Total numbers of A level students are as follows:

	2001	2002	2003	2004	2005	2006
A level students	205,930	228,161	237,367	235,107	236,194	238,398

Percentage of students taking subjects

	2001 %	2002 %	2003 %	2004 %	2005 %	2006 %
A level students	100	100	100	100	100	100
Mathematics A	24	17.5	17.2	17.7	17.4	18.6
Further mathematics A	2.3	1.8	1.8	1.9	1.9	2.4
English A	33.3	29.7	28.3	28.4	29.8	29.9
Physics A	12.7	11.4	10.4	9.6	9.3	9.0
Geography A	15.4	13.2	12.7	12.2	11.5	11.4
Media A	0.1	5.9	6.4	6.7	6.7	7.4
Psychology A	0.9	10.9	12.5	14.0	14.8	16.2

This table, at the level of the individual, shows more strikingly the decline in the proportion of individuals taking mathematics at A level, but also some possible recovery in the first year of the new award. The percentage of students taking mathematics declined from 24% in 2001 to

a low of 17.4% in 2005, but rose to 18.6% in 2006. This represents a drop of 22.5% overall. The original comparison subjects all experienced a drop, in English the overall drop has been 10.2%, whilst in physics and geography the figures are even more striking than mathematics, they do not have a 2006 ‘clawback’, and show a total drop of 29.1% for physics (a close cognate for mathematics) and of 26% in geography. Further mathematics has shown an overall increase from 2.3% to 2.4% (with a somewhat varied experience in between), a gain of 4.3%.

The new comparator subjects, media and psychology, again show very different patterns to the original subjects – showing continued growth over all the years, from negligible levels in 2001 to 7.4% in media and 16.2% in psychology in 2006.

Table 5: Numbers of students taking AS only (excluding A level)

Total numbers of AS level only students are as follows:

	2001	2002	2003	2004	2005	2006
AS only students	22,423	41,238	45,619	46,396	46,156	49,079

Percentage of AS only students taking subjects

	2001	2002	2003	2004	2005	2006
	%	%	%	%	%	%
AS only students	100	100	100	100	100	100
Mathematics AS	15.6	13.2	12.5	12.4	12.3	13.7
English AS	17.4	24.1	23.2	23.2	23.7	23.5
Physics AS	7.9	8.4	8.0	7.8	7.4	7.6
Geography AS	6.4	8.4	8.3	7.7	7.3	7.4
Media AS	7.9	9.4	9.9	10.8	11.2	12.1
Psychology AS	15.5	18.8	20.0	22.0	22.8	24.7

This table shows take up of the Advanced Subsidiary qualifications, which were awarded for the first time in 2001. Over this time the picture for the comparator subjects has been mixed. Mathematics showed a decline from 15.6% in 2001 to 12.3% in 2005, but has – in 2006 – recovered to 13.7%, its highest point since 2001. English has risen from 17.4% in 2001 to 23.5% in 2006. Physics has, on balance, shown an overall decline from 7.9% to 7.6%, although there was some increase in 2002, the picture since then has been one of decline. Geography shows an overall increase from 6.4% to 7.4%, but the picture since the 2002 high

of 8.4% has been one of continued decline. Media and psychology, as in all indicators have continued to increase share, media rising from 7.9% to 12.1% and psychology from 15.15% to 24.7%. These very high figures for these subjects, when compared to their A level totals, show their popular use as AS only provision.

Table 6: Numbers of students taking at least one A level, but only an AS in comparison subject

Total numbers of students taking at least one A level with an additional AS

	2001	2002	2003	2004	2005	2006
A level students	205,353	228,161	237,367	235,107	236,194	238,398

Percentage of students taking at least one A level, but only an AS in comparison subject

	2001 %	2002 %	2003 %	2004 %	2005 %	2006 %
A level students	100	100	100	100	100	100
Mathematics AS	3.4	8.3	7.2	6.7	6.0	6.3
Further mathematics AS	0.9	0.8	0.7	0.9	1.0	1.2
English AS	0.9	6.1	6.2	6.2	6.5	6.6
Physics AS	0.8	3.4	3.5	3.6	3.7	4.0
Geography AS	0.5	3.5	3.3	3.1	3.1	3.3
Media AS	-	3.1	3.3	3.8	3.8	3.7
Psychology AS	-	7.7	8.3	9.4	10.0	10.3

This table shows students who have taken full A levels in one or more subjects, but only an AS in the named subject. This may be exemplified as the 'fourth AS', or the subject that students decide not to continue to full award status. It is interesting to see in this table that mathematics started with a considerably larger percentage of AS than other subjects, 3.4% compared with less than 1% in the other subjects, over time mathematics has increased its proportion of students to 6.3% in 2006 (with a high of 6.7% in 2004). English has seen the largest increase in this category, gaining from 0.9% to 6.6% from 2001 to 2006. Both physics and geography have seen large increases in the proportions they have in this category,

physics from 0.8% to 4.0%, geography from 0.5% to 3.3%. Further mathematics has increased from 0.9% to 1.2%.

Although these gains look encouraging at one level, it is worth looking at them in the context of Table 2 where all the comparator qualifications have shown a decrease in their overall share of A levels taken, except for the new comparators, psychology and media, where significant gains have been made. It is likely that those qualifications that have seen the increase in take up – the ‘newer’ qualifications were initially taken as the ‘fourth AS’, but were carried on to A level at the expense of subjects such as mathematics, English, physics and geography.

The new subjects show a pattern from 2002 (when full A levels were available), media has gained from 3.1% to 3.7%, whereas psychology has continued to grow from 7.7% to 10.3% in 2006.

Average GCSE (full and short-course) point scores

Table 7: AS only students (average GCSE point score)

	2001	2002	2003	2004	2005	2006
All AS levels only	4.8	4.9	4.9	4.9	4.9	4.9
Mathematics AS	5.4	5.4	5.4	5.5	5.4	5.5
Further mathematics AS	6.0	5.7	5.7	6.3	6.3	6.1
English AS	5.0	5.1	5.1	5.1	5.1	5.1
Physics AS	5.5	5.4	5.3	5.4	5.4	5.4
Geography AS	5.1	5.2	5.1	5.2	5.2	5.2
Media AS	4.6	4.8	4.8	4.8	4.8	4.8
Psychology AS	4.9	5.0	5.1	5.1	5.1	5.1

Table 7 shows that mathematics and physics have a similar average point GCSE point score, and that further mathematics has the highest. This remains true for tables 8 and 9. The average GCSE point score is often used to describe the difficulty of a qualification: with higher average point score correlating with higher demand. This may be because there are restrictions placed on the entry scores for those taking the award, or because it is seen as more demanding by students, who are discouraged from taking the qualification as a result. In 2006 our comparator subjects all remain relatively stable, the largest change from 6.3 to 6.1 for further mathematics AS only students. There has not been a ‘democratisation’ of the type of student achieving mathematics, with mathematics and further mathematics continuing to lead the tables, rivalled only by physics. Psychology and media show the lowest average GCSE point scores, with media the lowest of all.

Table 8: Students taking at least one A level, but only an AS in comparison subject (average GCSE point score)

	2001	2002	2003	2004	2005	2006
Mathematics AS	5.9	6.2	6.2	6.3	6.2	6.2
Further mathematics AS	6.9	6.9	7.0	6.9	7.0	7.0
English AS	5.6	5.9	5.9	5.9	5.9	6.0
Physics AS	5.8	6.2	6.2	6.3	6.3	6.3
Geography AS	5.5	6.0	6.0	6.0	6.1	6.0
Media AS	5.4	5.5	5.5	5.5	5.5	5.5
Psychology AS	5.8	5.7	5.7	5.8	5.8	5.8

Table 9: A level students (average GCSE point score)

	2001	2002	2003	2004	2005	2006
All A level	5.9	5.8	5.9	5.9	5.9	6.0
Mathematics	6.5	6.6	6.7	6.7	6.7	6.7
Further mathematics	7.1	7.1	7.1	7.1	7.1	7.1
English	6.0	6.0	6.1	6.0	6.1	6.1
Physics	6.5	6.5	6.6	6.6	6.6	6.7
Geography	6.1	6.1	6.1	6.2	6.2	6.2
Media	5.4	5.5	5.5	5.5	5.5	5.5
Psychology	5.6	5.9	6.0	5.9	6.0	6.0

A level as a proportion of AS

This analysis looks, for each subject, at the total number of A level qualifications as a proportion of the total number of AS qualifications gained.

Table 10a: A level as a proportion of AS (mathematics)

Mathematics

Year	Total A level	Total AS	A level as % of AS
2001	49,429	59,821	82.6
2002	40,021	64,406	62.1
2003	40,717	63,523	64.1
2004	41,536	62,969	66.0
2005	41,047	60,907	67.4

2006	44,364	66,106	67.1
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Table 10b: A level as a proportion of AS (English)

English

Year	Total A level	Total AS	A level as % of AS
2001	68,500	74,169	92.4
2002	67,876	91,658	74.1
2003	67,069	92,435	72.6
2004	66,697	91,993	72.5
2005	70,310	96,697	72.7
2006	71,196	98,382	72.4

Table 10c: A level as a proportion of AS (physics)

Physics

Year	Total A level	Total AS	A level as % of AS
2001	26,114	29,604	88.2
2002	25,913	37,207	69.6
2003	24,571	36,523	67.3
2004	22,479	34,492	65.2
2005	21,992	32,638	67.4
2006	21,473	34,640	62.0

Table 10d: A level as a proportion of AS (geography)

Geography

Year	Total A level	Total AS	A level as % of AS
2001	31809	34282	92.8
2002	30018	41450	72.4
2003	30158	41742	72.2
2004	28579	39521	72.3
2005	27067	37713	71.8
2006	27087	38505	70.3

Table 10e: A level as a proportion of AS (further mathematics)

Further mathematics

Year	Total A level	Total AS	A level as % of AS
2001	4409	6445	68.4
2002	4133	5995	68.9
2003	4241	6028	70.4
2004	4409	6445	68.4
2005	4473	6815	65.6
2006	5663	8713	65.0

Table 10f: A level as a proportion of AS (media)

Media

Year	Total A level	Total AS	A level as % of AS
2001	129	15569	0.8
2002	13373	24226	55.2
2003	15137	27446	55.2
2004	15767	29634	53.2
2005	15804	29979	52.7
2006	17684	32443	54.5

Table 10g: A level as a proportion of AS (psychology)

Psychology

Year	Total A level	Total AS	A level as % of AS
2001	1944	31060	6.3
2002	24975	50181	49.8
2003	29744	58684	50.7
2004	32838	65242	50.3
2005	34874	69130	50.4
2006	38621	75263	51.3

Table 11: A level as a proportion of AS – all subjects

Year	Maths	English	Physics	Geog	Further maths	Media	Psych
2001	82.6	92.4	88.2	92.8	68.4	0.8	6.3
2002	62.1	74.1	69.6	72.4	68.9	55.2	49.8
2003	64.1	72.6	67.3	72.2	70.4	55.2	50.7
2004	66.0	72.5	65.2	72.3	68.4	53.2	50.3
2005	67.5	72.7	67.4	71.8	65.6	52.7	50.4
2006	67.1	72.4	62.0	70.3	65.0	54.5	51.3

In every case with our original comparator subjects we see the proportion being notably higher in 2001, compared with other years where there was much lower take-up of AS, with the exception of further mathematics where the proportions have remained stable over time. This probably reflects the fact that further mathematics was – until 2004 – still at a higher level of demand than other AS qualifications. In the interim report mathematics had the lowest rate of conversion over the time period, but including data up to 2006 we see that this is no longer the case, only English and geography show higher rates of conversion. The two new comparator subjects are very interesting, they have far lower conversion rates than the other subjects – in the low 50%s, further demonstrating an established pattern of their use as an additional subject at AS. This stability in proportion of student conversion needs also to be seen in the context of the big increase in numbers, and proportions, of students taking these new awards – this growth in numbers can also partly explain the decrease in conversion rates for the more established awards.

Further mathematics, in particular, has seen an increase in uptake at AS and thus its conversion rate to A level has declined.

Appendix B

Analysis of examination entry/results – Joint Council for Qualifications Inter-awarding Body Statistics

These data are drawn from the published Joint Council for Qualifications Inter-Awarding Body Statistics, they therefore exclude candidates who would have appeared in the provisional results but subsequently declined their grade.

Table 12a: AS level Subject entry numbers in 2001

	Maths	English	Geography	Physics	Media	Psychology
Number of entries	51940	76907	33665	30154	23736	42748

Table 12b: A level Subject entry numbers in 1999

	Maths	English	Geography	Physics	Media	Psychology
Number of entries	68502	90631	42474	33548	12679	29820

Table 13: Subject entry over time as a percentage of 2001 entry – AS level

Year	Maths AS	English AS	Geography AS	Physics AS	Media AS	Psychology AS
2001	100	100	100	100	100	100
2002	115.8	115.9	111.2	115.1	109.4	133.8
2003	116.1	115.9	106.5	110.0	118.5	138.2
2004	112.0	119.7	101.1	108.1	123.1	157.9
2005	126.3	121.1	102.8	105.7	128.1	165.9
2006	148.4	129.5	110.0	120.2	140.3	184.2

Table 13 shows AS level subject entry over time, the comparator year chosen here is 2001, the first year of Curriculum 2000 Advanced Subsidiary (AS), which replaced the previous Advanced Supplementary (AS).

In 2005–6 there has been a dramatic rise in the subject entry in mathematics AS, in fact mathematics has now shown the greatest proportion of increase of all the original comparator subjects, and also a larger proportion of increase than media. Only psychology has shown a

more impressive increase in 2006, showing 184.2% of its 2001 entry. This increase in mathematics take-up, if followed through to A level (as possibly indicated in the conversion rate data above), will be demonstrated in results for 2006 and 2007 at A level (see below).

Table 14: Subject entry over time as a percentage of 1999 entry – A level

Year	Maths A	English A	Geography A	Physics A	Media A	Psychology A
1999	100	100	100	100	100	100
2000	96.1	95.5	89.4	94.8	107.5	103.4
2001	96.2	93.2	88.9	95.4	118.7	105.9
2002	76.9	87.8	81.8	91.7	141.9	115.3
2003	79.8	88.0	83.1	88.6	164.6	137.7
2004	82.8	88.6	79.5	82.7	178.5	152.9
2005	83.9	93.5	76.4	81.6	183.4	164.0
2006	91.5	95.6	76.6	81.6	197.1	176.5

Table 14 shows A level subject entry over time, as a percentage of 1999 for A level. We can see a substantial drop in mathematics entry from 2001 to 2002, substantially more than in other subjects and not accounted for by the variation in size of the A level cohort which increased in this time. There has been significant recovery in numbers since 2002, so that mathematics entry is now 91.5% of its 1999 amount showing a sharp increase in 2006, following on from the increase in 2005 AS entries. English has shown the highest proportion of the 1999 entry at 95.6%, but mathematics is far higher than physics with only 81.6% and geography with 76.6%.

Media and psychology figures have shown large increases consistently, but note there were very small entry figures in 1999.

Table 15: AS – Percentage of entry gaining A to E grades

Year	Maths AS	English AS	Geography AS	Physics AS	Media AS	Psychology AS
2001	66.6	92.8	86.5	83.0	94.4	83.4
2002	81.7	94.7	91.7	86.6	94.6	83.9
2003	82.7	95.2	91.9	85.6	95.0	82.7
2004	84.6	95.5	91.7	85.8	95.2	84.1
2005	86.4	96.3	92.0	86.6	95.3	84.5
2006	84.3	96.0	90.8	84.2	94.3	81.5

This table shows the percentages of the subject entry achieving at grades A to E in AS. The very low pass rate for maths in 2001, compared with the other subjects, relates to the well publicised AS examinations that year where there was a very high rate of failure.

The AS results in table 15 are for certificated AS qualifications only, and thus exclude those students who declined their certification. This may have had the effect of emphasising the failure rate. It is possible that good students who performed less well than they expected decided not to accept their AS and continued the A level, hoping to improve through resitting, whereas those with poor results, including failures, may not to have continued with the full award and therefore may have accepted their certification. The figures in Table 14 support this hypothesis, showing a large decrease in A level entry in 2002.

Both mathematics and physics show a markedly lower achievement A to E than English and geography.

Between 2004 and 2006 all subjects have seen a slightly lower percentage gaining A to E than in the previous year, with the exception of English. The new comparator subjects show a reasonably steady pattern over time, although psychology has seen the biggest drops in pass rate between 2004 and 2006.

Table 16: A level – percentage A to E grades

Year	Maths A	English A	Geography A	Physics A	Media A	Psychology A
1999	89.8	92.7	92.8	89.8	95.0	83.0
2000	90.2	93.2	92.7	89.9	95.0	83.5
2001	90.2	93.9	93.2	89.9	96.0	84.7
2002	95.4	98.4	98.0	94.3	98.2	93.4
2003	95.7	98.6	98.1	94.3	98.3	94.6
2004	96.4	98.6	98.4	94.9	98.5	95.4
2005	96.8	98.8	98.7	95.1	98.8	95.8
2006	97.1	98.8	98.7	94.7	98.8	95.3

There is much more uniformity in these figures, with all subjects showing an increase in pass rates over time. Note there was no drop in achievement in 2002 of a similar order to that seen at AS in 2001, rather there was a substantial increase in pass rates (from 90.2% to 95.4%).

In 2005–6, pass rates were much the same in most subjects, with mathematics showing a slight increase, and physics a slight decrease. The new comparator subjects show some increase over time, the most dramatic example being psychology. Interestingly, the large

increase in psychology pass rates was seen between 2001 and 2002, which corresponded with a large hike in average student GCSE point score (from 5.6 to 5.9), possibly reflecting a change in the composition of the cohort.

Comparison of 2006 AS pass rates and 2006 A level pass rates shows highest levels of disparity between mathematics (86.4% at AS and 97.1% at A level and psychology 84.5% at AS and 95.3% at A level). Physics shows a relatively high level of disparity, but English, geography and media are all much closer. This evidence also lends support to the hypothesis that mathematics AS (and physics) ‘weed out’ a significant number of less able students.

Table 17: AS – percentage A to C grades

Year	Maths AS	English AS	Geography AS	Physics AS	Media AS	Psychology AS
2001	44.6	62.7	60.7	58.7	68.0	50.7
2002	58.1	63.6	64.6	61.3	63.3	52.4
2003	59.7	62.0	64.0	59.1	64.4	50.9
2004	61.4	63.2	64.5	59.4	66.7	52.0
2005	64.6	65.4	64.6	60.0	66.3	52.8
2006	62.4	65.1	60.4	57.6	64.5	48.6

Table 17 shows the impact of the 2001 problems on the percentage A to C grades, with its figures showing substantially poorer performance than other subjects, and than other years for mathematics. Since 2002, mathematics has generally shown an increase, as has English, but all other subjects have shown a net decline in this time.

Table 18: A level – percentage A to C

Year	Maths A	English A	Geography A	Physics A	Media A	Psychology A
1999	65.3	58.5	62.8	63.6	58.0	51.0
2000	66.1	59.6	64.1	63.8	57.0	51.0
2001	65.5	61.2	65.1	63.7	62.7	54.0
2002	75.8	70.7	71.9	67.0	68.4	59.7
2003	76.8	72.2	74.1	67.4	68.5	63.6
2004	78.2	72.0	75.5	69.2	71.9	65.5
2005	79.9	73.2	76.2	69.3	73.7	65.2
2006	81.0	74.6	77.0	68.9	74.2	65.2

For A level, 2002 is the first year of awarding Curriculum 2000 A levels, and there is a very large increase in high grade achievement in mathematics and English in particular in this year, mathematics rising from 65.5% to 75.8% and English from 61.2% to 70.7%. The rates of A to C have continued to improve in all subjects since this time (although physics showed a slight decline in 2006).

Table 19: AS – percentage A grade

Year	Maths AS	English AS	Geography AS	Physics AS	Media AS	Psychology AS
2001	20.9	17.5	20.2	24.6	13.8	13.6
2002	29.4	18.0	23.4	26.2	12.1	15.7
2003	29.7	16.9	23.3	25.3	13.3	15.1
2004	31.3	16.9	23.4	25.0	14.7	15.1
2005	34.4	18.0	24.0	25.2	14.4	14.9
2006	32.0	17.4	22.6	22.9	13.8	13.1

It is interesting here that, even for the first Curriculum 2000 AS in mathematics in 2001, mathematics students still gained proportionately more A grades than either English or geography. The difference between mathematics and English is now extremely large with 32% in mathematics and only 17.4% in English. This figure is lower for both media and psychology (13.8% and 13.1% respectively), but it should be noted that the prior achievement levels for both these subjects are lower than the original comparator awards.

Table 20: A level – percentage A grade

Year	Maths A	English A	Geography A	Physics A	Media A	Psychology A
1999	29.2	15.4	16.7	24.6	9.3	12.1
2000	29.8	16.0	18.1	25.1	9.7	12.0
2001	30.2	17.0	19.5	25.3	11.4	13.2
2002	40.3	19.3	21.0	27.8	11.7	16.2
2003	40.6	20.6	23.6	28.2	12.4	17.7
2004	41.9	21.3	24.7	29.6	13.5	18.7
2005	44.1	21.3	25.0	29.7	13.0	18.5
2006	45.3	21.9	25.6	29.4	13.3	17.8

The difference between mathematics and other subjects is extremely marked in this table, with over 45% achieving A grades in 2006, compared with the high of 29.4% in physics, 25.6% in geography, and 21.9% in English. The difference between table 17 and table 15 is striking since the subjects are much more similar at the A to C range.

The series of tables from 15 to 20 are very interesting with respect to the two new comparator subjects, media and psychology, when considered next to the original subjects. Although there are fairly comparable overall rates of achievement from A to E, the rates of achievement at the higher levels – A to C and A grade – for both AS and A level are markedly lower.

The statistics on average GCSE point score indicate that these students have the lowest scores of all the subjects looked at, with media significantly lower than the rest. Media does show the lowest achievement rates at the highest grades. In fact, a cross-reference of the average GCSE point score to this table on proportions of A grades achieved demonstrates an exact match of position between level of GCSE point score and proportion achieving A grade – mathematics has the highest point score, and the highest proportion of A grades, physics the second and so on.

The comparisons about AS and A level achievement hold across all grade achievement – with mathematics consistently showing the largest differences between AS and A grades in 2005 AS and 2006 A level.

Male/female participation

Table 21: Candidates taking A and AS level English – by sex

Qual type	Year	Total taking	Number male	% male	Number female	% female
English						
A	1999	90,627	26,273	28.99	64,354	71.01
	2000	86,548	25,052	28.95	61,496	71.05
	2001	84,484	24,569	29.08	59,915	70.92
	2002	79,612	24,021	30.17	55,591	69.83
	2003	79,746	23,614	29.61	56,132	70.39
	2004	80,262	24,243	30.20	56,019	69.80
	2005	84,757	25,932	30.6	58,824	69.4
	2006	86,640	26,821	31.0	59,819	69.0
AS	2001	76,891	23,255	30.24	53,636	69.76
	2002	89,149	26,640	29.88	62,509	70.12
	2003	89,149	26,870	30.14	62,279	69.86
	2004	92,080	28,161	30.58	63,919	69.42
	2005	93,133	28,896	31.0	64,237	69.0

	2006	99,591	30,538	30.7	69,053	69.3
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The proportions of males and females taking the A level and the AS are quite similar over time, and between qualification types. This continues to be true for 2005–6

Table 22: Candidates taking A and AS level geography – by sex

Qual type	Year	Total taking	Number male	% male	Number female	% female
Geography						
A	1999	42,458	22,824	53.76	19,634	46.24
	2000	37,955	20,480	53.96	17,475	46.04
	2001	37,745	20,267	53.69	17,478	46.31
	2002	34,745	18,762	54.00	15,983	46.00
	2003	35,306	19,046	53.95	16,260	46.05
	2004	33,751	18,451	54.67	15,300	45.33
	2005	32,462	17,515	54.0	14,946	46.0
	2006	32,524	17,694	54.4	14,828	45.6
AS	2001	33,658	18,147	53.92	15,511	46.08
	2002	37,415	19,944	53.30	17,471	46.70
	2003	35,860	19,371	54.02	16,489	45.98
	2004	34,035	18,329	53.85	15,706	46.15
	2005	34,624	18,686	54.0	15,936	46.0
	2006	37,033	20,220	54.6	16,811	45.4

The proportions of males and females taking the A level and the AS are quite similar over time, and between qualification types. This continues to be true for 2005–6

Table 23: Candidates taking A and AS level mathematics – by sex

Qual type	Year	Total taking	Number male	% male	Number female	% female
Mathematics*						
A	1999	68,502	43,708	63.8	24,776	36.2
	2000	65,836	41,198	62.6	24,615	37.4
	2001	65,893	41,498	63.0	24,381	37.0
	2002	52,657	33,221	63.1	19,427	36.9
	2003	54,667	34,292	62.7	20,366	37.3
	2004	56,708	35,251	62.2	21,449	37.8
	2005	57,440	36,013	62.7	21,424	37.3
	2006	62,666	38,891	62.1	23,775	37.9
AS	2001	51,940	31,539	60.7	20,377	39.2

	2002	60,159	36,270	60.3	23,869	39.7
	2003	60,316	36,434	60.4	23,877	39.6
	2004	58,194	35,300	60.7	22,886	39.3
	2005	65,624	39,679	60.5	25,938	39.5
	2006	77,092	45,859	59.5	31,232	40.5

*slightly amended figures for all years

The proportions of males and females taking the A level and the AS are quite similar over time, and between qualification types, although there is a persistently, but slight, higher proportion of girls doing AS than A level.

It should be noted that 2006 saw girls break the 40% barrier, and boys go below 60% for the first time!

Table 24: Candidates taking A and AS level physics – by sex

Qual type	Year	Total taking	Number male	% Male	Number female	% Female
Physics						
A	1999	33,545	25,801	76.91	7,744	23.09
	2000	31,793	24,500	77.06	7,293	22.94
	2001	31,993	24,931	77.93	7,062	22.07
	2002	30,765	23,631	76.81	7,134	23.19
	2003	29,728	22,929	77.13	6,799	22.87
	2004	27,759	21,557	77.66	6,202	22.34
	2005	27,370	21,348	78.0	6,021	22.0
	2006	27,368	21,408	78.2	5,960	21.8
AS	2001	30,150	22,845	75.77	7,305	24.23
	2002	34,689	25,905	74.68	8,784	25.32
	2003	33,172	25,169	75.87	8,003	24.13
	2004	32,588	24,567	75.39	8,021	24.61
	2005	31,875	24,036	75.4	7,836	24.6
	2006	36,258	27,378	75.5	8,880	24.5

The proportions of males and females taking the A level and the AS are quite similar over time, and between qualification types, although – like mathematics - there is a persistently, but slight, higher proportion of girls doing AS than A level. This continues to be true for 2005–6

Table 25: Candidates taking A and AS level psychology – by sex

Qual type	Year	Total taking	Number male	% Male	Number female	% Female
Psychology						

A	1999	29,820	6,840	22.9	22,980	77.1
	2000	30,841	6,953	22.5	23,887	77.5
	2001	31,586	7,096	22.5	24,489	77.5
	2002	34,395	7,893	22.9	26,499	77.0
	2003	41,075	9,908	24.1	31,167	75.9
	2004	45,583	11,398	25.0	34,183	75.0
	2005	48,899	12,414	25.4	36,485	74.6
	2006	52,621	13,485	25.6	39,136	74.4
AS	2001	42,748	11,011	25.8	31,731	74.2
	2002	57,192	15,411	26.9	41,776	73.0
	2003	59,080	16,763	28.4	42,315	71.6
	2004	67,486	19,355	28.7	48,131	71.3
	2005	70,921	20,570	29.0	50,350	71.0
	2006	78,732	22,750	28.9	55,981	71.1

The proportions of males and females taking the A level and the AS are quite similar over time, although there was a decline from a persistent approximate 77% of females taking psychology A level from 1999 to 2002 down to 74.4% by 2006. There was a similar decline in the proportion of girls at AS between 2001 and 2003. In an inverse position to mathematics – there is a persistently, but slight, higher proportion of boys doing AS than A level.

Table 26: Candidates taking A and AS level media – by sex

Qual type	Year	Total taking	Number male	% Male	Number female	% Female
Media						
A	1999	12,679	5,234	41.3	7,435	58.6
	2000	13,632	5,679	41.7	7,945	58.3
	2001	15,047	6,315	42.0	8,728	58.0
	2002	17,986	7,538	41.9	10,441	58.1
	2003	20,864	8,776	42.1	12,088	57.9
	2004	22,636	9,742	43.0	12,894	57.0
	2005	23,256	9,919	42.7	13,328	57.3
	2006	24,988	10,954	43.8	14,034	56.2
AS	2001	23,736	10,394	43.8	13,333	56.2
	2002	25,968	11,290	43.5	14,678	56.5
	2003	28,129	12,339	43.9	15,790	56.1
	2004	29,225	12,877	44.1	16,348	55.9
	2005	30,402	13,658	44.9	16,672	54.8
	2006	33,304	14,909	44.8	18,393	55.2

The proportions of males and females taking the A level and the AS are quite similar over time with a gradual decline from 58.6% to 56.2% between 1999 and 2006 at A level and from 56.2% to 55.2% between 2001 and 2006 at AS level. As with psychology, a slightly higher proportion of boys take the AS than A level.

AS and A level grade achievement by sex over time

English

Table 27: A level English

Year	%m	%f	% A m	% A f	% B m	% B f	% C m	% C f	% D m	% D f	% E m	% E f	% F M	% F f	% U m	% U f
99	29.0	71.0	16.4	14.9	20.3	18.9	22.6	24.3	19.6	21.6	12.9	13.4	5.6	5.0	2.6	1.9
00	28.9	71.1	16.8	15.7	19.6	19.5	23.2	24.4	20.1	21.4	12.5	12.7	5.3	4.6	2.5	1.9
01	29.1	70.9	17.8	16.7	20.1	19.9	23.4	24.7	19.6	21.1	12.0	12.0	4.9	4.2	2.2	1.4
02	30.2	69.8	19.2	19.3	23.2	24.8	26.5	27.5	20.5	19.5	8.6	7.5	N/a	N/a	2.1	1.4
03	29.6	70.4	21.1	20.4	23.2	25.1	26.3	27.4	19.4	19.3	8.2	6.6	N/a	N/a	1.8	1.3
04	30.2	69.8	21.9	21.1	22.9	24.1	25.9	27.4	19.7	19.2	8.1	7.0	N/a	N/a	1.6	1.2
05	30.6	69.4	21.4	21.3	23.7	24.9	26.3	27.8	19.6	18.5	7.6	6.4	N/A	N/a	1.4	1.0
06	31.0	69.0	21.7	22.0	24.7	26.1	27.1	27.9	18.4	18.5	6.6	5.8	N/A	N/a	1.5	1.1

Male: Increase in proportion achieving A, B, C and D grades
 Decrease in number achieving E, F and U
 2005–6 patterns continue, but D now decreasing proportion slightly

Female: Increase in number achieving A, B and C grades
 Decrease in number achieving D, E, F and U
 2005–6 patterns continue, but D now decreasing proportion slightly

Table 28: AS level English

Year	%m	%f	% A m	% A f	% B m	% B f	% C m	% C f	% D m	% D f	% E m	% E f	% U m	% U f
2001	30.2	69.8	16.6	17.9	19.4	21.1	23.8	24.9	20.2	19.6	11.4	10.0	8.6	6.6
2002	29.9	70.1	16.9	18.4	19.7	21.9	23.3	24.9	20.6	19.7	12.9	10.4	6.7	4.7
2003	30.1	69.9	16.4	17.1	18.4	21.0	23.8	25.3	21.9	21.0	13.4	11.2	6.1	4.3
2004	30.6	69.4	16.1	17.3	19.4	21.5	24.7	25.7	21.3	20.6	12.8	10.9	5.6	4.0
2005	31.0	69.0	17.1	18.3	20.5	22.2	25.0	26.2	20.8	20.2	11.7	9.8	4.9	3.2
2006	30.7	69.3	16.5	17.8	21.6	22.0	26.5	26.7	22.7	20.5	12.0	9.6	5.4	3.5

Male: Increase in proportion achieving C, D and E grades
 Decrease in proportion achieving A, B and U
 2005–6 increase at B, C and D, decrease at E

Female: Increase in proportion achieving B, C, D and E grades
 Decrease in proportion achieving A and U
 2005–6 increase at B and C

Geography

Table 29: A level geography

Year	%m	%f	% A m	% A f	% B m	% B f	% C m	% C f	% D m	% D f	% E m	% E f	% F M	% F f	% U m	% U f
1999	53.8	46.2	14.3	19.4	21.6	23.8	23.7	23.4	20.0	17.3	12.3	9.8	5.6	4.3	2.4	1.9
2000	54.0	46.0	15.2	21.5	21.7	24.6	23.3	22.3	19.1	16.0	12.4	9.3	5.7	4.4	2.6	1.8
2001	53.7	46.3	16.1	23.5	21.9	24.1	23.1	22.1	19.3	15.5	12.0	9.1	5.4	4.0	2.4	1.7
2002	54.0	46.0	16.9	25.9	24.5	27.8	25.7	23.9	20.3	14.5	10.1	6.5	N/a	N/a	2.5	1.4
2003	53.9	46.1	19.1	28.8	25.9	27.3	24.9	22.8	18.4	14.0	9.3	5.8	N/a	N/a	2.3	1.4
2004	54.7	45.3	20.5	29.8	25.8	28.5	25.2	22.0	17.9	13.0	8.6	5.5	N/a	N/a	2.0	1.1
2005	54.0	46.0	20.8	29.9	25.7	28.2	25.7	22.7	17.7	13.4	8.3	4.9	N/a	N/a	1.8	0.8
2006	54.4	45.6	21.2	31.0	26.1	28.4	25.7	22.4	17.6	12.5	7.8	4.8	N/a	N/a	1.7	0.9

Male: Increase in proportion achieving A, B and C grades
 Decrease in proportion achieving D, E, F and U
 2005–6 increase at A, B and C, decrease at D, E and U

Female: Increase in proportion achieving A, and B grades
 Decrease in proportion achieving C, D, E, F and U
 2005–6 increase at A, and decrease at E and U

Table 30: AS level geography

Year	%m	%f	% A m	% A f	% B m	% B f	% C m	% C f	% D m	% D f	% E m	% E f	% U m	% U f
2001	53.9	46.1	16.2	24.9	19.0	21.3	20.9	19.9	17.6	13.4	11.6	8.5	14.7	12.0
2002	53.3	46.7	18.8	28.5	20.1	21.8	21.2	19.5	17.6	14.1	12.7	9.2	9.6	6.9
2003	54.0	46.0	19.3	28.1	19.6	21.6	20.7	19.6	17.9	14.9	13.0	9.3	9.5	6.6
2004	53.9	46.1	19.1	28.6	19.5	22.2	21.1	19.4	17.8	14.2	12.6	9.3	10.0	6.3
2005	54.0	46.0	19.9	28.8	19.3	21.9	21.3	18.7	17.5	14.1	12.7	9.9	9.3	6.6
2006	54.6	45.4	18.9	27.0	18.9	20.9	20.7	19.3	18.3	15.1	13.0	9.8	10.3	7.9

Male: Increase in proportion achieving A, B, C, D and E grades
 Decrease in proportion achieving U
 2005–6 increase at D, decrease at B and C

Female: Increase in number achieving A, B, D and E grades
 Decrease in number achieving C and U
 2005—6 increase at D, E and U, decrease at A and B

Mathematics

Table 31: A level mathematics

Year	%m		%A		%B		%C		%D		%E		%F		%U	
	m	f	m	f	m	f	m	f	m	f	m	f	m	f	m	f
1999	63.8	36.2	29.0	29.7	18.4	21.0	16.5	17.1	13.8	13.7	11.2	9.8	5.7	4.6	5.4	4.1
2000	62.6	37.4	29.3	30.7	18.8	20.5	16.5	17.3	14.3	13.7	10.4	9.6	5.6	4.4	5.2	3.7
2001	63.0	37.0	29.9	30.7	18.2	20.5	15.7	17.2	14.2	13.6	11.1	9.9	5.8	4.5	5.1	3.5
2002	63.1	36.9	38.9	42.8	19.2	20.8	15.7	15.6	12.3	10.8	8.6	6.6	N/a	N/a	5.3	3.4
2003	62.7	37.3	39.1	43.0	19.6	21.8	16.1	15.3	11.8	10.6	8.4	6.1	N/a	N/a	5.0	3.2
2004	62.2	37.8	41.0	43.3	20.0	22.1	15.7	15.5	11.4	10.0	7.9	6.3	N/a	N/a	4.1	2.8
2005	62.7	37.3	42.7	46.4	20.3	21.8	15.1	14.6	11.0	9.6	7.1	5.3	N/a	N/a	3.7	2.2
2006	62.1	37.9	43.9	47.6	20.4	21.6	15.0	14.6	10.6	8.7	6.8	5.0	N/a	N/a	3.3	2.4

Male: Increase in proportion achieving A and B grades
 Decrease in proportion achieving C, D, E, F and U
 2005—6 increase at A, decrease at D, E and U

Female: Increase in proportion achieving A and B grades
 Decrease in proportion achieving C, D, E, F and U
 2005—6 increase at A, decrease at B, C, D and E

Table 32: AS level mathematics

Year	%m		%A		%B		%C		%D		%E		%U	
	m	f	m	f	m	f	m	f	m	f	m	f	m	f
2001	60.7	39.2	20.5	21.6	10.8	13.7	11.2	12.6	11.4	11.7	10.8	10.0	35.3	30.5
2002	60.3	39.7	28.0	31.6	14.1	15.9	13.3	14.5	12.6	12.0	11.6	10.8	20.3	15.2
2003	60.4	39.6	28.5	31.5	14.5	17.3	13.8	15.1	12.2	11.9	11.4	10.1	19.5	14.0
2004	60.7	39.3	30.2	32.9	15.1	17.1	14.0	14.6	12.6	12.3	10.9	10.3	17.2	12.7
2005	60.5	39.5	32.8	36.9	15.5	17.8	13.5	14.2	12.2	11.0	10.6	9.3	15.4	10.8
2006	59.5	40.5	31.3	33.2	15.2	17.1	13.9	15.0	11.8	12.2	10.4	9.1	17.3	13.3

Male: Increase in proportion achieving A, B, C, D and E grades
 Decrease in proportion achieving U
 2005—6 decrease at A and D

Female: Increase in proportion achieving A, B, C, D and E grades

Decrease in proportion achieving U

2005—6 increase at A and F, decrease at E and U

(*Note that 2001 AS was a notoriously difficult year with a much higher proportion of U grades than any other.)

Physics

Table 33: A level physics

Year	%m		%f		% A		% B		% C		% D		% E		% F		% U	
	m	f	m	f	m	f	m	f	m	f	m	f	m	f	M	f	m	f
1999	76.9	23.1	24.2	26.0	19.7	21.8	18.5	19.6	15.5	13.9	11.5	9.9	6.6	5.4	4.0	3.2		
2000	77.1	22.9	24.0	28.7	19.5	22.5	18.6	18.2	15.4	13.5	11.6	9.6	6.8	4.8	4.1	2.7		
2001	77.9	22.1	24.5	28.1	19.2	23.0	18.4	18.0	14.9	13.9	12.1	9.3	6.7	4.8	4.1	3.0		
2002	76.8	23.2	26.3	33.0	20.0	22.5	18.7	18.5	16.2	14.2	12.5	8.5	N/a	N/a	6.4	3.4		
2003	77.1	22.9	26.7	33.3	20.4	22.7	18.3	17.8	16.2	13.0	12.1	9.3	N/a	N/a	6.2	3.9		
2004	77.7	22.3	28.1	34.7	20.1	23.6	19.1	17.6	15.5	13.1	11.5	8.2	N/a	N/a	5.7	2.8		
2005	78.0	22.0	28.1	35.4	20.6	23.1	18.6	17.6	15.8	12.5	11.5	8.1	N/a	N/a	5.4	3.4		
2006	78.2	21.8	27.7	35.6	20.9	22.7	18.5	17.3	15.4	12.4	11.7	8.6	N/a	N/a	5.8	3.5		

Male: Increase in proportion achieving A, B, C, D and U grades

Decrease in proportion achieving E and F

2005—6 slight increase at B and C, slight decrease at A

Female: Increase in proportion achieving A and B grades

Decrease in proportion achieving C, D, E, F and U

2005—6 increase at A, E and U, decrease at B and D

Table 34: AS level physics

Year	%m		%f		% A		% B		% C		% D		% E		% U	
	m	f	m	f	m	f	m	f	m	f	m	f	m	f	m	f
2001	75.8	24.2	22.9	29.7	17.2	19.1	16.3	17.0	14.2	12.0	11.4	8.3	18.0	14.0		
2002	74.7	25.3	24.2	32.3	17.8	20.4	16.6	16.7	14.6	12.4	12.0	9.2	14.9	9.0		
2003	75.9	24.1	23.5	30.9	17.0	19.5	16.1	16.8	14.7	13.0	12.7	10.6	16.0	9.3		
2004	75.4	24.6	23.4	30.1	17.0	20.2	16.5	17.0	14.9	12.9	12.7	9.9	15.6	9.9		
2005	75.4	24.6	23.7	29.9	17.4	19.6	16.8	17.2	15.3	13.0	12.2	10.7	14.6	9.7		
2006	75.5	24.5	21.6	27.1	16.8	20.1	16.9	17.4	14.9	13.7	12.7	9.7	17.1	11.9		

Male: Increase in proportion achieving A, C, D and E grades

Decrease in proportion achieving B and U

2005—6 increase at C and U, decrease at A

Female: Increase in proportion achieving A, B, D and E grades
 Decrease in proportion achieving C and U
 2005—6 increase at C, D and U, decrease at A

Media

Table 35: A level media

Year	%m	%f	% A m	% A f	% B m	% B f	% C m	% C f	% D m	% D f	% E m	% E f	% F M	% F f	% U m	% U f
1999	41.3	58.6	8.9	9.6	15.6	18.5	28.5	33.4	26.7	24.7	13.7	9.8	4.6	2.9	1.9	1.0
2000	41.7	58.3	8.3	10.7	14.5	19.1	28.5	31.3	28.1	24.6	14.2	10.3	4.1	2.8	2.2	1.2
2001	42.0	58.0	10.2	12.2	16.1	19.6	31.8	34.3	25.5	22.1	11.5	8.5	3.3	2.3	1.7	1.1
2002	41.9	58.1	8.9	13.7	21.7	26.6	32.8	31.7	24.4	20.4	9.8	6.3	N/A	N/A	2.3	1.4
2003	42.1	57.9	9.7	14.3	22.1	27.1	31.0	31.3	25.3	19.7	9.5	6.4	N/A	N/A	2.4	1.2
2004	43.0	57.0	10.4	15.9	22.9	29.6	32.5	31.0	23.9	17.4	8.2	5.0	N/A	N/A	2.0	1.1
2005	42.7	57.3	10.2	15.1	24.9	29.9	33.5	32.5	22.2	17.3	7.5	4.2	N/A	N/A	1.6	0.9
2006	43.8	56.2	10.5	15.6	24.7	30.7	33.6	32.1	22.1	16.3	7.4	4.5	N/A	N/A	1.7	0.8

Male: Large increase in proportion achieving at B and C
 Decrease in number achieving at D and E

Female: Increase in number achieving A, B and C grades
 Decrease in number achieving D, and E

Table 36: AS level media

Year	%m	%f	% A m	% A f	% B m	% B f	% C m	% C f	% D m	% D f	% E m	% E f	% U m	% U f
2001	43.8	56.2	11.4	15.6	23.1	27.4	28.9	28.6	19.6	16.8	10.1	6.9	6.9	4.6
2002	43.5	56.5	9.5	14.2	20.2	25.5	27.8	28.0	23.0	18.9	12.7	9.1	6.8	4.4
2003	43.9	56.1	10.3	15.7	20.9	25.6	27.7	27.4	22.4	18.6	12.4	8.6	6.2	4.1
2004	44.1	55.9	12.1	16.7	21.5	25.8	27.7	28.3	21.7	17.4	10.7	8.0	6.2	3.7
2005	44.9	54.8	11.5	16.9	21.9	26.1	27.4	28.0	21.6	17.9	11.6	7.5	6.0	3.6
2006	44.8	55.2	10.6	16.3	21.1	25.7	27.6	26.9	21.7	18.3	11.8	8.5	7.2	4.4

Male and female: Patterns reasonably stable across mark range over time.

Psychology
Table 37: A level psychology

Year	%m	%f	% A m	% A f	% B m	% B f	% C m	% C f	% D m	% D f	% E m	% E f	% F M	% F f	% U m	% U f
1999	22.9	77.1	8.0	13.4	14.7	19.1	19.2	21.2	18.5	18.0	16.6	13.2	11.9	9.1	11.1	6.1
2000	22.5	77.5	7.8	13.2	14.0	20.0	19.8	20.6	19.5	18.1	16.5	13.3	12.2	9.0	10.2	5.8
2001	22.5	77.5	8.6	14.5	15.6	20.7	20.0	21.6	19.2	17.1	14.8	12.6	11.9	7.9	9.8	5.6
2002	22.9	77.0	9.7	18.1	16.7	22.1	22.2	22.8	23.1	19.1	18.2	12.3	N/a	N/a	10.1	5.5
2003	24.1	75.9	10.9	19.8	18.3	24.0	22.7	23.5	22.5	18.0	16.2	10.5	N/a	N/a	9.4	4.1
2004	25.0	75.0	11.7	21.0	19.4	24.2	24.2	23.7	21.8	17.4	16.2	9.8	N/a	N/a	6.8	3.9
2005	25.4	74.6	12.0	20.7	19.1	24.3	23.2	23.8	22.9	17.8	16.2	10.0	N/a	N/a	6.7	3.3
2006	25.6	74.4	11.3	20.1	19.0	24.2	25.1	24.3	22.2	17.8	15.2	9.7	N/a	N/a	7.2	3.9

Male: Increase in proportion achieving A, B, C and D grades
Decrease in number achieving U

Female: Increase in number achieving A, B and C grades
Decrease in number achieving E and U

Table 38: AS level psychology

Year	%m	%f	% A m	% A f	% B m	% B f	% C m	% C f	% D m	% D f	% E m	% E f	% U m	% U f
2001	25.8	74.2	15.8	15.5	12.8	18.2	19.5	20.5	19.6	17.6	17.6	13.5	22.0	14.8
2002	26.9	73.0	16.3	18.0	13.3	18.6	18.8	19.7	19.8	16.8	17.0	12.8	21.6	14.1
2003	28.4	71.6	16.8	17.5	13.3	18.0	18.2	19.4	18.7	16.7	17.4	13.4	23.3	14.9
2004	28.7	71.3	18.0	17.4	13.7	18.6	18.6	20.1	19.5	16.9	17.9	13.2	20.9	13.9
2005	29.0	71.0	18.0	17.2	14.0	19.2	19.4	20.4	19.6	16.8	16.9	12.9	20.8	13.3
2006	28.9	71.1	17.1	15.3	12.8	17.5	18.0	19.8	19.7	17.5	17.5	13.6	24.2	16.2

Male and female: Patterns reasonably stable across mark range over time.

Appendix C

Analysis of examination sitting patterns – 2006 A level candidates only – AQA, Edexcel & OCR awarding body data

The evidence base considered in this section was developed to model the impact and extent of resitting activity, datasets were built as follows.

Candidates were 16 years old by September 1 2004 and had to have gained a complete set of 3 AS unit results. Units had to be achieved during the 4 assessment opportunities leading up to Summer 2006 results.

Notional student results were calculated on the basis of unit achievement, whether or not they cashed-in their results. For mathematics students the calculations were made on the basis of the six best unit grades, disregarding any relationship to further mathematics. Thus, the least best rule did not operate in these calculated results.

Mathematics (Edexcel) – A level candidates only

Table 41: M1 M2

Final number of attempts January 2005 to summer 2006					
Unit	1 (%)	2 (%)	3 (%)	4 (%)	Total
C1	70.4	22.5	6.2	0.9	4,328
C2	60.3	33.4	6.2	0.0	4,328
C3	74.7	24.2	1.1	0.0	4,328
C4	94.5	4.8	0.7	0.0	4,328
M1	60.1	30.6	9.2	0.1	4,328
M2	88.8	10.6	0.6	0.0	4,328

Table 42: Resitting rates:

Unit	At least one resit (%)	Two or more resits (%)
M1	39.9	9.2
C2	39.7	6.2
C1	29.6	7.2
C3	25.3	1.1
M2	11.2	0.6
C4	5.5	0.7

[I have added in percentage to the column heads of both the above tables, I realise the text below explains the tables but I think it would be clearer to do this, if ok I'll amend all the relevant tables in this section accordingly – yes that's fine

Almost 40% of candidates had at least one re-sit of M1 and C2, 30% re-sat C1, and a quarter of candidates too C3 at least twice. M1 was sat three or more times by 9.2% of candidates, C1 by 7.2% of candidates and C2 by 6.2% of candidates. C3, M2 and C4 all had low numbers taking 3 or more times.

Table 43: S1 S2

Final number of attempts January 2005 to summer 2006					
Unit	1	2	3	4	Total
C1	64.2	26.7	8.3	0.9	4012
C2	50.7	42.0	7.3	0.0	4012
C3	73.9	25.6	0.5	0.0	4012
C4	97.9	1.8	0.2	0.0	4012
S1	58.7	32.1	9.0	0.2	4012
S2	89.1	10.6	0.2	0.0	4012

Table 44: Resitting rates (at least one resit) of:

Unit	At least one resit	Two or more resits
C2	49.3	7.3
S1	41.3	9.2
C1	35.8	9.2
C3	26.1	0.5
S2	10.9	0.2
C4	2.1	0.2

In this combination C2 was taken at least twice by around half of candidates, with over 40% resitting S1, and over 35% resitting C1. Over a quarter of students also resat C3.

S1 and C1 both had 9.2% of candidates sitting at least three times, and C2 by 7.3% of candidates. C3, S2 and C4 all had very low numbers retaking more than twice.

Table 45: D1 D2

Final number of attempts January 2005 to summer 2006					
Unit	1	2	3	4	Total
C1	72.6	22.1	4.7	0.5	190
C2	51.6	41.6	6.8	0.0	190
C3	65.3	34.7	0.0	0.0	190
C4	96.3	3.2	0.5	0.0	190
D1	66.8	28.9	4.2	0.0	190
D2	98.4	1.6	0.0	0.0	190

Table 46: Resitting rates (at least one resit) of:

Unit	At least one resit	Two or more resits
C2	48.4	6.8
C3	34.7	0
D1	33.2	4.2
C1	27.4	5.2
C4	3.7	0.5
D2	1.6	0

In this combination C2 was taken at least twice by almost half of candidates, around one third resat C3 and D1, and over a quarter of students also resat C1.

In terms of at least two resits by candidates, C2 had 6.8%, D1 4.2% and C1 5.2%. C4 had negligible numbers and D2 and C3 no candidates sitting more than twice.

Table 47: M1 S1

Final number of attempts January 2005– to summer 2006					
Unit	1	2	3	4	Total
C1	64.1	26.4	8.5	1.0	8970
C2	51.9	39.4	8.7	0.0	8970
C3	72.0	26.9	1.0	0.0	8970
C4	95.3	4.0	0.8	0.0	8970
M1	74.2	21.3	4.3	0.1	8970
S1	71.6	23.2	5.1	0.1	8970

Table 48: Resitting rates (at least one resit) of:

Unit	At least one resit	Two or more resits
C2	48.1	8.7
C1	35.9	9.5
S1	28.4	5.2
C3	28	1.0
M1	25.8	4.4
C4	4.7	0.8

In this combination almost half of students took C2 at least twice, and over 35% took C1 at least twice. Around 28% of students retook S1 and C3 and over a quarter of students retook M1.

Sitting three times or more: 9.5% in C1, 8.7% in C2, 5.2 in S1 and 4.4 in M1, C3 and C4 reported negligible numbers.

Table 49: S1 D1

Unit	1	2	3	4	Total
C1	62.5	27.0	9.1	1.4	1,433
C2	50.2	40.5	9.2	0.1	1,433
C3	65.7	32.3	2.0	0.0	1,433
C4	94.1	5.1	0.8	0.0	1,433
S1	69.2	25.3	5.3	0.2	1,433
D1	81.6	14.5	3.6	0.3	1,433

Table 50: Resitting rates (at least one resit) of:

Unit	At least one resit	Two or more resits
C2	49.8	9.3
C1	37.5	10.5
C3	34.3	2
S1	30.8	5.5
D1	18.4	3.9
C4	5.9	5.9

In this combination almost half of students took C2 at least twice, and over 37% took C1 at least twice. Around a third of students retook C3, and over 30% took S1 on at least 2 occasions.

Sitting three or more times: C1 10.5% of students, C2 9.3%, S1 5.5%, C4 5.9%, D1 3.9% and C3 2%.

Table 51: M1 D1

Final number of attempts January 2005 to summer 2006					
Unit	1	2	3	4	Total
C1	69.2	23.6	6.5	0.7	944
C2	57.9	34.6	7.2	0.2	944
C3	69.2	28.4	2.4	0.0	944
C4	90.0	8.7	1.3	0.0	944
M1	71.5	22.7	5.8	0.0	944
D1	75.8	19.2	4.9	0.1	944

Table 52: Resitting rates (at least one resit) of:

Unit	At least one resit	Two or more resits
C2	42.1	7.4
C1	30.8	7.2
C3	30.8	2.4
M1	28.5	5.8
D1	24.2	5
C4	10	1.3

In this combination 42% of students took C2 at least twice, and around 30% took C1, C3 and M1 at least twice. Around a quarter of students retook D1.

Sitting the exam three or more times: C2 7.4% of students, C1 7.2%, M1 5.8%, D1 5%, C3 2.4%, and C4 1.3%.

Table 53: Edexcel French

Final number of attempts January 2005 to summer 2006					
Unit	1	2	3	4	Total
6441	46.6	44.5	8.8	0.0	4,685

6442	45.4	45.8	8.8	0.0	4,685
6443	76.4	22.7	0.9	0.0	4,685
6444	98.7	1.3	0.1	0.0	4,685
6445	99.8	0.2	0.0	0.0	4,685
6446	99.6	0.4	0.0	0.0	4,685

Table 54: Resitting rates (at least one resit) of:

Unit	At least one resit	Two or more resits
6442 - AS	54.6	8.8
6441 - AS	53.4	8.8
6443 - AS	23.6	0.9
6444 – A2	1.3	0.1
6446 – A2	0.4	0
6445 – A2	0.2	0

In this combination over half of students (55% and 53.4%) retook two AS units, and about a quarter retook the final AS unit. Resitting of A2 units was negligible.

Resitting on two or more occasions: in two AS units 8.8%, a further two units (one AS and one A2) had below 1% and the remaining two A2 units had no students sitting more than twice.

Table 55: English – Edexcel

Final number of attempts January 2005 to summer 2006					
Unit	1	2	3	4	Total
6391	72.0	24.9	3.1	0.0	7,580
6392	65.4	31.0	3.5	0.0	7,580
6393	87.4	12.6	0.0	0.0	7,580
6394	92.8	7.2	0.0	0.0	7,580
6395	100.0	0.0	0.0	0.0	7,580
6396	100.0	0.0	0.0	0.0	7,580

Table 56: Resitting rates (at least one re-sit) of:

Unit	At least one resit	Two or more resits
6392AS	34.6	3.5
6391AS	28.0	3.1

6393AS	12.6	0
6394A2	7.2	0
6395A2	0.0	0
6396A2	0.0	0.0

In this combination one third of students took AS unit 6392, 28% retook AS unit 6391 and around 13% retook the third AS unit, re-sitting of A2 units was negligible by comparison (7.2% for the first A2 unit).

Resitting twice or more: in English the first two AS units had relatively low proportions (3.5% and 3.1%) the remaining units reported no students taking the units more than twice.

Table 57: Geography – OCR – A level candidates only

Final number of attempts January 2005 to– summer 2006					
Unit	1	2	3	4	Total
2680	62.2	29.5	8.2	0.1	4,043
2681	64.1	30.0	5.9	0.0	4,043
2682	52.1	39.1	8.5	0.4	4,043
2683	76.8	23.2	0.0	0.0	4,043
2684	99.7	0.3	0.0	0.0	4,043
2685	100.0	0.0	0.0	0.0	3,436
2686	98.8	1.2	0.0	0.0	607

Table 58: Title? Resitting rates (at least one resit) of:

Unit	At least one resit	Two or more resits
2682AS	47.9	8.9
2680AS	37.8	8.3
2681AS	35.9	5.9
2683A2	23.2	0
2686A2	1.2	0
2684A2	0.3	0
2685A2	0.0	0

In this combination almost half of students took AS unit 2682, 38% retook AS unit 2680 and around 36% retook the third AS unit, re-sitting of A2 units accounted for 23.2% of students for 2683 with negligible levels in the other A2 units.

In terms of units sat three or more times, two AS units showed rates of over 8% (8.9% and 8.3%), the third AS unit had a 5.9% resitting rate. The remaining units (all A2) had no students resitting more than twice.

Table 59: Media studies (OCR)

Final number of attempts January 2005– to summer 2006					
Unit	1	2	3	4	Total
2730	96.5	3.3	0.1	0.0	9726
2731	77.4	21.2	1.3	0.0	9726
2732	77.8	20.2	1.9	0.1	9726
2733	99.5	0.5	0.0	0.0	9726
2734	81.6	18.4	0.0	0.0	9726
2735	98.1	1.9	0.0	0.0	9726

Table 60: Title? Resitting rates (at least one resit) of:

Unit	At least one resit	Two or more resits
2731AS	22.6	1.3
2732AS	22.2	2.0
2734A2	18.4	0
2730AS	3.5	0.1
2735A2	1.9	0
2733A2	0.5	0

In this award, around 20% of students resat two AS units and one A2 unit the other units had negligible amounts of resitting.

In terms of the frequency of sitting units three or more times, one unit reported a rate of 2% of the students, another AS unit had a rate of 1.3%, the third was 0.1% and three A2 units reported no candidates sitting more than twice.

Table 61: Percentage of total unit candidates taking 1,2,3 and 4 times (psychology AQA)

Unit	1	2	3	4	Total
PYA1	69.1	26.3	4.3	0.3	14,882
PYA2	71.4	24.2	4.2	0.2	14,882
PYA3	72.7	23.7	3.6	0.0	14,882

PYA4	87.2	12.8	-	-	14,882
PYA5	99.2	0.8	-	-	14,882
PYA6	88.2	11.8	-	-	14,882

Table 62: Title? Resitting rates (at least one resit) of:

Unit	At least one resit	Two or more resits
PYA1 AS	30.9	4.6
PYA2 AS	28.6	4.4
PYA3 AS	27.3	3.6
PYA4 A2	12.8	0
PYA6 A2	11.8	0
PYA5 A2	0.8	0

In this award for each of the three AS units there were around 30% retaking. Around 12% retook A2 units PYA4 and PYA6, with negligible numbers resitting the third A2 award.

In terms of students sitting examinations on three or more occasions, the three AS units showed rates of around 4% (4.6, 4.4 and 3.6) the A2 units showed no candidates resitting so frequently.

Table 63: Physics AQA

Unit	1	2	3	4	Total
PA01	59.9	33.8	6.0	0.3	2,286
PA02	51.1	41.8	6.7	0.3	2,286
PA03	65.8	30.9	3.3	0.0	2,286
PA04	68.9	31.1			2,286
PA5-9	100.0	0.0			2,286
PA10	100.0	0.0			2,286

Table 64: Resitting rates (at least one resit) of:

Unit	At least one resit	Two or more resits
PA02 AS	48.9	7.0
PA01 AS	40.1	6.3
PA03 AS	34.2	3.3
PA04 A2	31.1	0

PA5-9 A2	0	0
PA10 A2	0	0

For this award almost half of students resat AS unit PA02 and 40% AS PA01, around a third resat the third AS unit and the first AS unit. The other A2 units had negligible numbers resitting.

For this subject each of the three AS units had candidates sitting on at least three occasions – (7.0, 6.3 and 3.3% respectively). No candidates took A2 units more than twice.

Summary

The six most common combinations are shown separately in mathematics, because of the unusual structure of the award. For other subjects the most usual combination is shown.

Interestingly, the rate of resitting varies across the combinations of A level mathematics, however, in all cases there are always at least 25% of candidates resitting four units (and sometimes a similar proportion resitting a further unit). This is not typical in other subjects, except Physics, and it is noticeable that those mathematics qualifications containing a higher proportion of AS units show the higher rate of resitting across more units.

In addition, although relatively infrequent, the mathematics' figures show increased rates of resitting on two or more occasions than other subjects. French shows the closest parallel – doubtless because of the maturation benefit of this award, seen also to some extent in physics. In all subjects, except mathematics there is almost no reported multiple resitting in the A2 component of the qualifications.

Table 65: Impact of resitting AS units in second year of programme on A level result

Awarding body	Subject	% achieving grade A in a notional A level result (using AS result at end of year 1)	% achieving grade A in an actual A level result (using AS result at end of year 2)	Change
AQA	Psychology	17.5	19.8	+ 2.3
AQA	English literature	21.5	24.0	+ 2.5
AQA	Physics	26.6	31.1	+ 4.5
Edexcel	English literature	25.4	30.4	+ 5.0
Edexcel	French	26.2	33.4	+ 7.2
Edexcel	Mathematics M1, S1*	39.3	47.1	+ 7.8

The table above shows the impact of resitting behaviour in respect of AS units on final A level grades – mathematics is the biggest beneficiary of this behaviour, with an increase of 7.8 percentage points.

Appendix D

Grade ranges for GCE mathematics – by unit combination – Edexcel data

The evidence base considered in this section was developed to model the impact and extent of resitting activity, datasets were built as follows.

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Candidates were 16 years old by September 1 2004 and had to have gained a complete set of 3 AS unit results. Units had to be achieved during the 4 assessment opportunities leading up to Summer 2006 results.

Notional student results were calculated on the basis of unit achievement, whether or not they cashed-in their results. For mathematics students the calculations were made on the basis of the six best unit grades, disregarding any relationship to further mathematics. Thus, the least best rule did not operate in these calculated results.

A level candidates with AS by summer 2006

Table 66: Grade A totals - summary of all options

No	Make up	Optional unit content	% A grade
1	3 AS 3 A2	Mechanics M1 (AS), mechanics M2 (A2)	52.5
2	4 AS 2 A2	Statistics S1 (AS), statistics S2 (A2)	42.2
3	3 AS 3 A2	Decision mathematics D1 (AS), decision mathematics D2 (A2)	42.6
4	4 AS 2 A2	Mechanics M1 (AS), statistics S1 (AS)	47.1
5	4 AS 2 A2	Statistics S1 (AS), decision mathematics D1 (AS)	37.8
6	4 AS 2 A2	Mechanics M1 (AS), decision mathematics D1 (AS)	51.1

Options showing unit grade distributions

Table 67: Option 1

Cash-in unit	Code	No cand	Cumulative percentages					
			A	B	C	D	E	U
AL Cash-in	9371 Op1	4328	52.5	72.0	84.9	92.7	97.6	100
AS Unit	6663	4328	80.7	92.5	97.6	99.4	99.9	100
AS Unit	6664	4328	66.7	85.5	93.8	97.2	99.1	100
AS Unit	6677	4328	61.9	83.5	92.7	96.7	98.7	100

A2 Unit	6665	4328	49.4	69.2	80.0	87.3	93.3	100
A2 Unit	6666	4328	34.7	48.7	62.3	72.6	81.0	100
A2 Unit	6678	4328	42.0	58.5	71.6	82.9	89.3	100

Table 68: Option 2

Cash-in unit	code	No candS	Cumulative percentages					
			A	B	C	D	E	U
AL Cash-in	9371 Op2	4012	42.2	64.5	79.9	90.9	96.9	100
AS Unit	6663	4012	73.5	88.8	96.4	99.2	99.8	100
AS Unit	6664	4012	57.3	80.9	91.4	96.2	98.9	100
AS Unit	6683	4012	51.2	73.2	87.3	95.6	98.7	100
A2 Unit	6665	4012	38.4	58.6	71.2	82.1	90.2	100
A2 Unit	6666	4012	25.2	38.4	52.4	64.2	75.9	100
A2 Unit	6684	4012	35.0	61.0	76.6	84.3	90.3	100

Table 69: Option 3

Cash-in unit	Code	No candS	Cumulative percentages					
			A	B	C	D	E	U
AL Cash-in	9371 Op3	190	42.6	66.8	82.6	93.7	98.9	100
AS Unit	6663	190	74.7	92.6	98.9	100	100	100
AS Unit	6664	190	53.7	82.1	89.5	96.8	98.4	100
AS Unit	6689	190	50.5	75.3	90.5	95.8	98.9	100
A2 Unit	6665	190	38.4	62.1	74.2	86.8	91.6	100
A2 Unit	6666	190	26.8	38.9	53.2	67.4	75.3	100
A2 Unit	6690	190	44.2	62.1	81.1	91.6	95.3	100

Table 70: Option 4

Cash-in unit	code	No candS	Cumulative percentages					
			A	B	C	D	E	U
AL Cash-in	9371 Op 4	8970	47.1	68.6	82.8	92.0	97.2	100
AS Unit	6663	8970	77.4	90.9	96.9	99.2	99.8	100
AS Unit	6664	8970	61.6	82.5	91.8	96.9	98.9	100
AS Unit (AS Cash Op1)	6677	3749	53.1	75.3	86.5	93.0	97.2	100
AS Unit (AS Cash Op2)	6683	5221	45.8	69.5	84.5	92.9	97.4	100
A2 Unit	6665	8970	41.9	61.8	74.1	82.9	90.2	100
A2 Unit	6666	8970	26.4	40.1	54.2	66.5	77.1	100
A2 Unit (AS Cash Op2)	6677	5221	47.6	69.2	81.0	87.7	92.6	100
A2 Unit (AS Cash Op1)	6683	3749	53.8	74.5	86.6	93.1	96.6	100

Table 71: Option 5

Cash-in Unit	Code	No candS	Cumulative percentages					
			A	B	C	D	E	U
AL Cash-in	9371 Op 5	1433	37.7	58.6	74.9	88.0	96.1	100
AS Unit	6663	1433	69.6	85.6	94.6	99.0	99.7	100
AS Unit	6664	1433	52.1	76.1	87.2	94.1	97.5	100
AS Unit (AS Cash Op2)	6683	1009	44.3	64.8	77.8	90.9	97.3	100
AS Unit (AS Cash Op3)	6689	424	37.5	62.0	78.5	89.6	96.7	100
A2 Unit	6665	1433	34.1	53.4	66.2	77.2	87.1	100
A2 Unit	6666	1433	22.0	34.1	46.2	58.5	69.9	100
A2 Unit (AS Cash Op3)	6683	424	45.8	67.5	83.0	91.3	96.2	100
A2 Unit (AS Cash Op2)	66897	1009	40.5	60.8	74.4	84.1	90.2	100

Table 72: Option 6

Cash-in unit	Code	No candS	Cumulative percentages					
			A	B	C	D	E	U
AL Cash-in	9371 Op 6	944	50.1	66.5	81.0	89.8	96.6	100
AS Unit	6663	944	74.8	88.5	96.4	98.8	99.9	100
AS Unit	6664	944	61.4	80.1	90.5	95.7	98.8	100
AS Unit (AS Cash Op1)	6677	643	55.4	71.4	83.0	90.4	96.4	100
AS Unit (AS Cash Op3)	6689	643	51.2	68.9	79.3	87.6	93.3	100
A2 Unit	6665	944	43.3	62.2	74.2	82.8	89.4	100
A2 Unit	6666	944	29.0	44.2	56.3	67.1	77.2	100
A2 Unit (AS Cash Op3)	6677	301	51.2	72.1	82.4	88.4	95.0	100
A2 Unit (AS Cash Op1)	6689	301	44.2	63.1	81.4	89.0	96.3	100