UMS
Awarding GCSE 2009

INTRODUCTION

UMS stands for Uniform Mark Scale. The Uniform Mark Scale is used to convert candidates' component 'raw' marks into uniform marks. This is done in order to standardise marks from year to year. For example, a candidate who just achieves an A in a unit one year will receive the same uniform mark as a candidate achieving that same level the following year, regardless of their raw marks.

THE CONVERSION PROCESS

Raw marks to Grades

Following the marking of scripts, a committee of senior examiners reviews the quality of the work submitted for each individual paper. Using their professional judgement, and statistical and technical evidence, they decide where to set the raw mark grade boundaries for each paper. Table 1, as an example, shows possible raw mark paper boundaries for GCSE Geography A units.

Table 1

Unit	Tier	Max Raw Mark	Raw mark boundaries							
			A*	A	B	C	D	E	F	G
5GA04	-	50	40	37	34	31	26	21	16	11
5GA1F	F	50				28	24	20	17	14
5GA1H	H	50	35	31	27	23	20	18		
5GA2F	F	50				28	25	22	19	16
5GA2H	H	50	40	35	30	25	20	17		
5GA3F	F	50				28	24	21	18	15
5GA3H	H	50	38	33	28	24	21	19		

Note: On higher tier papers, the "allowed" grade E is calculated as half a grade width.

This table shows that the minimum raw mark required to obtain each grade can vary between units, even when they are marked out of the same total.

Raw Marks to Uniform Marks

The raw mark grade boundaries and all the candidates' raw marks are entered into Edexcel's computer. The computer converts the raw marks into uniform marks.

GCSE Geography A is out of 400 uniform marks. These uniform marks are divided between the contributing units in a manner that reflects their weighting. For example unit 5GA04 contributes 25% of the GCSE and so represents 25% of the 400 uniform marks, namely 100 uniform marks. However, as GCSE Geography A is tiered, it is only the Higher tiered units which carry the maximum uniform marks. The Foundation tiered units, where the highest grade available is a C, carry a maximum uniform mark of 69.

The uniform grade boundaries for each unit are fixed and are shown in Table 2.

Table 2

Unit, Tier and percentage contribution			Maximum UMS	Uniform mark boundaries							
				A*	A	B	C	D	E	F	G
5GA04	-	25%	100	90	80	70	60	50	40	30	20
5GA1F	F	25%	69				60	50	40	30	20
5GA1H	H	25%	100	90	80	70	60	50	45		
5GA2F	F	25%	69				60	50	40	30	20
5GA2H	H	25%	100	90	80	70	60	50	45		
5GA3F	F	25%	69				60	50	40	30	20
5GA3H	H	25%	100	90	80	70	60	50	45		

Note: On higher tier papers, the "allowed" grade E is calculated as half a grade width.

It is important to note that the scaling is not a single linear scale of maximum raw mark to maximum uniform mark. This is because the intervals between consecutive raw mark grade boundaries are not necessarily constant, however they are fixed for the uniform marks.

The Conversion to Uniform Marks Illustrated

The conversion below uses unit 5GA04 as an example. Table 3 shows the raw marks and the uniform marks. These marks have been taken from Table 1 and Table 2.

Table 3

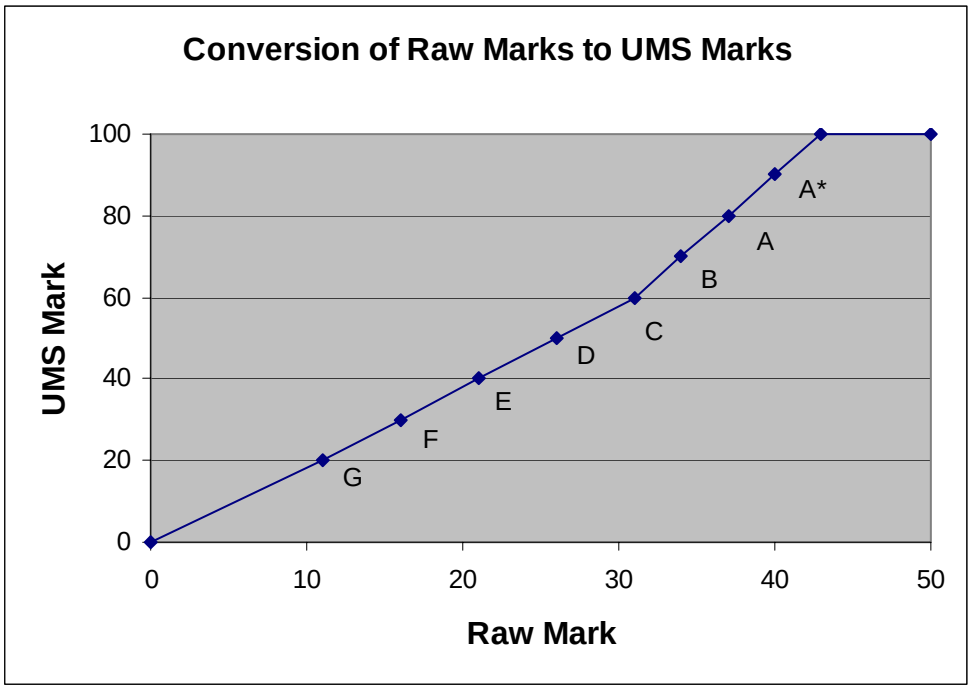
	Maximum Mark	Boundary at each grade							
		A*	A	B	C	D	E	F	G
Raw Mark	50	40	37	34	31	26	21	16	11
UMS Mark	100	90	80	70	60	50	40	30	20

Graph 1 shows the pairs of marks plotted with the raw mark on the horizontal axis against the uniform mark on the vertical axis. Straight lines join adjacent points. The line connecting the points for Grade A* and Grade A is extended to give the raw mark at which the maximum 100 uniform marks is reached.

For any raw mark, the uniform mark can be read off the graph. A candidate who achieves between 40 and 50 raw marks will gain between 90 and 100 uniform marks, between 37 and 40 raw marks would yield between 80 and 90 uniform marks and so on.

If extending the line connecting the top two grades - A and A* (on the higher tier and non-tiered units), and D and C (on the foundation tier) - results in the maximum raw mark converting to less than the maximum uniform mark then this extension is not used. Instead, a point is plotted of maximum raw mark against maximum uniform mark. A straight line is drawn from Grade A*, and Grade C, for the higher and foundation tiers respectively, to this point. The resulting line is used to read off the uniform marks in this range.

Graph 1



The second conversion below uses unit 5GA1H as an example. Table 4 shows the raw marks and the uniform marks. These marks have been taken from Table 1 and Table 2.

Table 4

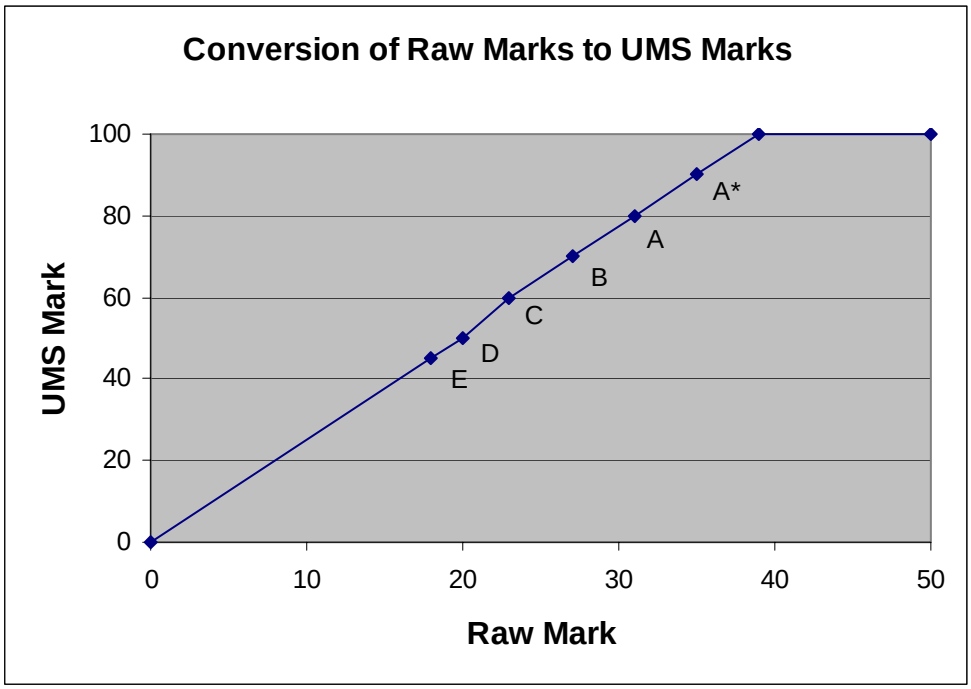
	Maximum Mark	Boundary at each grade					
		A*	A	B	C	D	E
Raw Mark	50	35	31	27	23	20	18
UMS Mark	100	90	80	70	60	50	45

Note: as 5GA1H is a higher tier paper, the "allowed" grade E is calculated as half a grade width

Graph 2 shows the pairs of marks plotted with the raw mark on the horizontal axis against the uniform mark on the vertical axis as before. The line connecting the points for Grade A* and Grade A is extended to give the raw mark at which the maximum 100 uniform marks is reached.

As in the earlier example, for any raw mark the uniform mark can be read off the graph. A candidate who achieves between 35 and 50 raw marks will achieve between 90 and 100 uniform marks, between 31 and 34 raw marks would give between 80 and 89 uniform marks and so on.

Graph 2



The third conversion below uses unit 5GA1F as an example. Table 5 shows the raw marks and the uniform marks. These marks have been taken from Table 1 and Table 2.

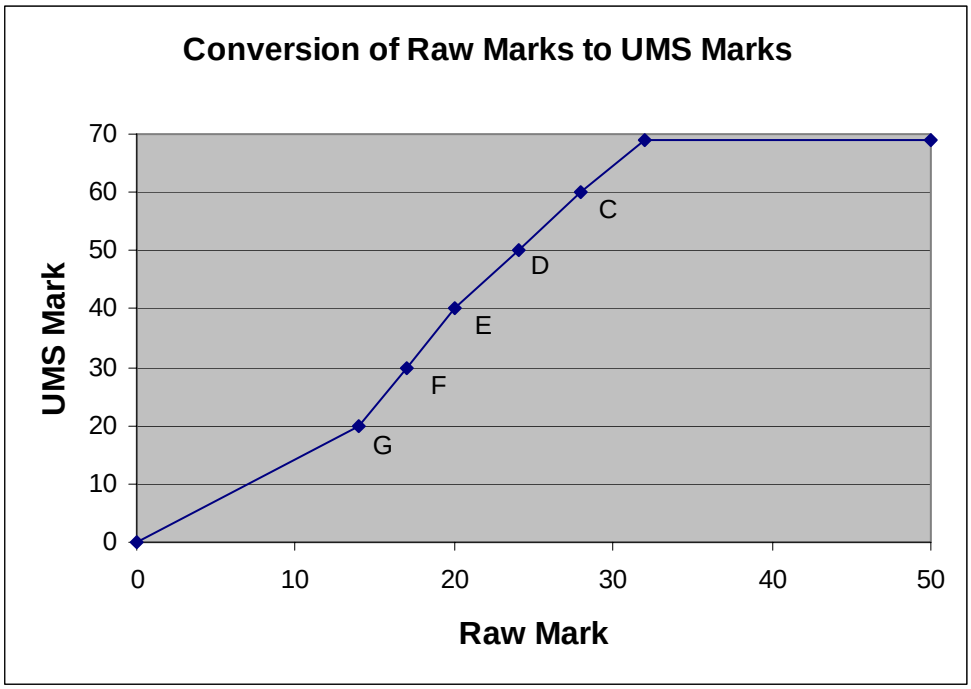
Table 5

	Maximum Mark	Boundary at each grade				
		C	D	E	F	G
Raw Mark	50	28	24	20	17	14
UMS Mark	69	60	50	40	30	20

Graph 3 shows the pairs of marks plotted with the raw mark on the horizontal axis against the uniform mark on the vertical axis as before. The line connecting the points for Grade C and Grade D is extended to give the raw mark at which the maximum 69 uniform marks is reached.

Reading off the graph, a candidate who achieves between 28 and 50 raw marks will achieve between 60 and 69 uniform marks, between 24 and 27 raw marks would give between 50 and 59 uniform marks and so on.

Graph 3



MAKING THE AWARD

Table 6 shows the number of uniform marks required to achieve each grade. Like the unit boundaries, these are also fixed.

Table 6

Grade	Uniform Mark Boundaries
A*	360
A	320
B	280
C	240
D	200
E	160
F	120
G	80

When a candidate 'cashes-in' for a GCSE Geography A award, assuming eligibility rules are satisfied, the uniform marks from each of the four units are simply totalled to give a final subject mark.

Examples

Using the earlier examples of raw grade boundaries, these examples show how candidates' raw marks for each unit convert to their overall qualification grade:

Table 7 – GCSE Geography (Foundation Tier)

Unit	Tier	Raw Mark	UMS Mark
5GA04	-	32	63
5GA1F	Foundation	25	53
5GA2F	Foundation	25	50
5GA3F	Foundation	23	47
		Total UMS	213

5GA04: A raw mark of 32 falls within the C range. The number of uniform marks available in this range are: 60-69. 32 raw marks convert to 63 uniform marks.

5GA1F: A raw mark of 25 falls within the D range. The number of uniform marks available in this range are: 50-59. 25 raw marks convert to 53 uniform marks.

5GA2F: A raw mark of 25 falls within the D range. The number of uniform marks available in this range are: 50-59. 25 raw marks convert to 50 uniform marks.

5GA3F: A raw mark of 23 falls within the E range. The number of uniform marks available in this range are: 40-49. 23 raw marks convert to 47 uniform marks.

Totalling the uniform marks achieved in each unit gives 213 uniform marks. Reading off from Table 6, it can be seen that this candidate will be awarded a Grade D in Geography.

Table 8 – GCSE Geography (Higher Tier)

Unit	Tier	Raw Mark	UMS Mark
5GA04	-	39	87
5GA1H	Higher	30	78
5GA2H	Higher	36	82
5GA3H	Higher	30	74
		Total UMS	321

5GA04: A raw mark of 39 falls within the A range. The number of uniform marks available in this range are: 80-89. 39 raw marks convert to 87 uniform marks.

5GA1H: A raw mark of 30 falls within the B range. The number of uniform marks available in this range are: 70-79. 30 raw marks convert to 78 uniform marks.

5GA2H: A raw mark of 36 falls within the A range. The number of uniform marks available in this range are: 80-89. 36 raw marks convert to 82 uniform marks.

5GA3H: A raw mark of 30 falls within the B range. The number of uniform marks available in this range are: 70-79. 30 raw marks convert to 74 uniform marks.

Totalling the uniform marks achieved in each unit gives 321 uniform marks. Reading off from Table 6, it can be seen that this candidate will be awarded a Grade A in Geography.

Table 9 – GCSE Geography (Mixed Tier)

Unit	Tier	Raw Mark	UMS Mark
5GA04	-	32	63
5GA1H	Higher	30	78
5GA2H	Higher	29	68
5GA3F	Foundation	27	58
		Total UMS	267

5GA04: A raw mark of 32 falls within the C range. The number of uniform marks available in this range are: 60-69. 32 raw marks convert to 63 uniform marks.

5GA1H: A raw mark of 30 falls within the B range. The number of uniform marks available in this range are: 70-79. 30 raw marks convert to 78 uniform marks.

5GA2H: A raw mark of 29 falls within the C range. The number of uniform marks available in this range are: 60-69. 29 raw marks convert to 68 uniform marks.

5GA3F: A raw mark of 27 falls within the D range. The number of uniform marks available in this range are: 50-59. 27 raw marks convert to 58 uniform marks.

Totalling the uniform marks achieved in each unit gives 267 uniform marks. Reading off from Table 6, it can be seen that this candidate will be awarded a Grade C in Geography A.