Pearson

Notional Component Grade Boundaries

Edexcel International GCSE (9-1) qualifications

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Understanding linear component raw marks and subject marks

Components of International GCSE and reformed GCSE, AS and A level qualifications are all sat at the end of the course. Components are individual assessments, such as examinations or non-exam assessments (NEA), which each make up a linear qualification. These qualifications are all linear rather than modular, which means that there is no longer a need for the UMS marks you will have been familiar with in the past.

The component structure of qualifications

In linear qualifications, each component has a total raw mark. The components contribute a certain percentage to the qualification mark overall, but the contribution of the components may not be equal. This is because one component may represent a larger part of the qualification than the others (see example 2, below). When the contribution of components to the qualification is not equal, the component raw marks, when simply added together, may not reflect the percentage contribution of the components to the qualification. In such cases the raw mark for the assessment is scaled up or down by a weighting factor. The raw mark is multiplied by the weighting factor so that it reflects the contribution of the component mark to the qualification.

The scaled marks, known as subject marks, are then added together to form the overall subject mark.

Two examples are given below.

Example 1: no scaling is needed as the total raw mark for each component reflects the percentage contribution of each to the qualification.

The total raw marks of all components in a linear qualification will add up to the total subject mark **if** they all contribute to the qualification equally.

Component Title	Raw Marks	Contribution to the Qualification	Weighting Factor	Total Scaled Mark
Paper 1	50	25%	1.000	50
Paper 2	50	25%	1.000	50
Paper 3	50	25%	1.000	50
Paper 4	50	25%	1.000	50
Subject max mark	200	100%		200

Example 2: scaling is needed as the raw mark for one or more components does not reflect the percentage contribution.

Component Title	Raw marks	Contribution to the qualification	Weighting Factor	Total Scaled mark
Paper 1	60	35%	1.458	87.5
Paper 2	45	20%	1.111	50
Paper 3	45	25%	1.389	62.5
Paper 4	50	20%	1.000	50
Subject max mark		100%		250

How candidates' grades are determined

Table 1 – candidates sitting the qualification in example 1

Component title	**Marks for candidate A**	**Mark for candidate B**
Paper 1	10	40
Paper 2	25	15
Paper 3	30	20
Paper 4	20	10
Subject mark	**85**	**85**

Since the marks for each component in the qualification represent the correct percentage contribution, the component marks are simply added to give the overall subject mark. In this example, both candidates A and B have achieved 85 marks for the overall subject. Since they both have the same subject mark, candidates A and B will receive the same grade even though their component performances are very different.

Suppose the subject grade boundaries were 81 marks for a grade C and 93 marks for a grade B. Since a subject mark of 85 lies within this mark range, both candidates A and B will receive a grade C for the qualification.

Table 2 – candidates sitting the qualification in example 2

Component title	Raw mark for candidate C	Weighting factor	Scaled mark
Paper 1	12	1.458	17.496
Paper 2	24	1.111	26.664
Paper 3	31	1.389	43.059
Paper 4	20	1.000	20.000
		Total:	107.219
		Subject mark:	**107**

Table 2 shows the performance of candidate C in the example 2 qualification. The second column, 'Raw mark', shows the marks achieved on each of the four papers. Since the marks for the components must be scaled to represent the percentage contribution of each paper to the overall subject, the component marks must be scaled, using the weighting factor shown in column 3, to give the scaled mark shown in column 4 of the table. The scaled marks are totalled to give 107.291 which is, as a final step, rounded to the nearest whole number to give the subject mark of 107.

Suppose the subject grade boundaries were 101 marks for a grade D and 115 marks for a grade C. Since a subject mark of 107 lies within this mark range, candidate C will receive a grade D for the qualification.

Please note that footnote 1, relating to the example 2 table, explains the need for the weighting factor and that the scaled marks are calculated to the third place of decimal.

The use of notional component grade boundaries

The above examples, showing the grades achieved by candidates A, B and C, illustrate that notional grade performance at component level plays no part in the determination of a qualification grade. In fact, table 1 shows that both candidates achieve the same subject mark even though their component performances are quite different. Given this, why are notional component grade boundaries published?

When the subject grade boundaries are recommended by the senior examiners, it helps them to consider the component performance for a candidate who will achieve, say, a borderline grade A by producing a borderline grade A performance on each component.

For teachers, the notional component grade boundaries can be useful as an indicator of grade performance when, for example, an examination paper is used as a future mock examination.

Linear qualifications and deciding whether to submit a post-results service (PRS) request

Component-level grade boundaries in these linear qualifications are notional only, and do not equate to a certificated grade.

When considering whether to submit a post-results service request, it is important to understand that notional grade boundaries - or how close a candidate may be to one - are not relevant.

A change in a notional component-level boundary may not equate to a subject grade change. For example, if a learner achieves Bs in each of the two components for a reformed AS level the component grade would be a B. If, after a review of marking, a component mark changes, and the notional grade increases from a B to an A, the overall AS subject grade may still remain a B when the component scores are combined*.

*if, when combined with the other component scores, the revised total equates to an A grade, the subject grade would be changed accordingly.

Biology													
Notional component grade boundaries			**Max Mark**	**9**	**8**	**7**	**6**	**5**	**4**	**3**	**2**	**1**	**U**
4BI1	Biology Paper 1B	Raw	110	81	68	56	44	32	21	18	15	12	0
4BI1	Biology Paper 1BR	Raw	110	79	67	55	45	35	25	21	17	13	0
4BI1	Biology Paper 2B	Raw	70	48	40	33	26	19	12	10	8	6	0
4BI1	Biology Paper 2BR	Raw	70	50	43	36	29	23	17	14	11	9	0

Chemistry													
Notional component grade boundaries			**Max Mark**	**9**	**8**	**7**	**6**	**5**	**4**	**3**	**2**	**1**	**U**
4CH1	Chemistry Paper 1C	Raw	110	81	68	55	42	29	17	14	11	8	0
4CH1	Chemistry Paper 1CR	Raw	110	86	74	63	52	41	31	25	19	14	0
4CH1	Chemistry Paper 2C	Raw	70	56	47	38	29	21	13	10	8	6	0
4CH1	Chemistry Paper 2CR	Raw	70	62	54	47	40	33	26	21	16	11	0

Mathematics A													
Notional component grade boundaries			**Max Mark**	**9**	**8**	**7**	**6**	**5**	**4**	**3**	**2**	**1**	**U**
4MA1	Mathematics A (Foundation) Paper 1F	Raw	100					62	50	36	23	10	0
4MA1	Mathematics A (Foundation) Paper 1FR	Raw	100					59	47	34	22	10	0
4MA1	Mathematics A (Foundation) Paper 2F	Raw	100					61	47	34	22	10	0
4MA1	Mathematics A (Foundation) Paper 2FR	Raw	100					59	46	34	22	10	0
4MA1	Mathematics A (Higher) Paper 1H	Raw	100	72	59	47	35	23	12	6			0
4MA1	Mathematics A (Higher) Paper 1HR	Raw	100	76	61	46	34	22	10	4			0
4MA1	Mathematics A (Higher) Paper 2H	Raw	100	69	56	44	33	22	12	7			0
4MA1	Mathematics A (Higher) Paper 2HR	Raw	100	76	60	45	33	21	10	4			0

Mathematics B													
Notional component grade boundaries			**Max Mark**	**9**	**8**	**7**	**6**	**5**	**4**	**3**	**2**	**1**	**U**
4MB1	Mathematics B Paper 01	Raw	100	65	52	39	29	19	10	5			0
4MB1	Mathematics B Paper 01R	Raw	100	77	61	46	34	23	12	6			0
4MB1	Mathematics B Paper 02	Raw	100	66	52	38	28	18	9	4			0
4MB1	Mathematics B Paper 02R	Raw	100	77	62	48	36	24	12	6			0

Physics												
Notional component grade boundaries			**Max Mark**	**9**	**8**	**7**	**6**	**5**	**4**	**3**	**2**	**1**	**U**
4PH1	Physics Paper 1P	Raw	110	81	66	51	39	27	16	13	10	8	0
4PH1	Physics Paper 1PR	Raw	110	84	72	61	48	35	23	19	15	12	0
4PH1	Physics Paper 2P	Raw	70	47	38	29	23	17	12	10	8	6	0
4PH1	Physics Paper 2PR	Raw	70	50	42	35	28	22	16	13	10	8	0

Science (Double Award)												
Notional component grade boundaries			**Max Mark**	**99**	**98**	**88**	**87**	**77**	**76**	**66**	**65**	**55**	**54**
4SD0	Science (Double Award) Paper 1B	Raw	110	81	74	68	62	56	50	44	38	33	28
				44	**43**	**33**	**32**	**22**	**21**	**11**			**U**
		Raw		21	19	17	16	14	13	12			0
Notional component grade boundaries			**Max Mark**	**99**	**98**	**88**	**87**	**77**	**76**	**66**	**65**	**55**	**54**
4SD0	Science (Double Award) Paper 1BR	Raw	110	79	73	67	61	55	50	45	40	35	30
				44	**43**	**33**	**32**	**22**	**21**	**11**			**U**
		Raw		25	23	21	19	17	15	13			0
Notional component grade boundaries			**Max Mark**	**99**	**98**	**88**	**87**	**77**	**76**	**66**	**65**	**55**	**54**
4SD0	Science (Double Award) Paper 1C	Raw	110	81	74	68	62	55	48	41	34	28	22
				44	**43**	**33**	**32**	**22**	**21**	**11**			**U**
		Raw		17	15	13	12	10	9	8			0

Science (Double Award) (Continued)												
Notional component grade boundaries			**Max Mark**	**99**	**98**	**88**	**87**	**77**	**76**	**66**	**65**	**55**	**54**
4SD0	Science (Double Award) Paper 1CR	Raw	110	86	80	75	70	63	57	51	45	40	35
				44	**43**	**33**	**32**	**22**	**21**	**11**			**U**
		Raw		31	28	25	22	19	16	14			0
Notional component grade boundaries			**Max Mark**	**99**	**98**	**88**	**87**	**77**	**76**	**66**	**65**	**55**	**54**
4SD0	Science (Double Award) Paper 1P	Raw	110	81	73	66	59	51	45	39	33	28	23
				44	**43**	**33**	**32**	**22**	**21**	**11**			**U**
		Raw		16	14	12	11	10	9	8			0
Notional component grade boundaries			**Max Mark**	**99**	**98**	**88**	**87**	**77**	**76**	**66**	**65**	**55**	**54**
4SD0	Science (Double Award) Paper 1PR	Raw	110	84	78	73	68	61	54	47	40	34	28
				44	**43**	**33**	**32**	**22**	**21**	**11**			**U**
		Raw		23	21	19	17	15	13	12			0