Mathematics guidance document: an introduction to new recording tables in Unit assessment support packs for National 3–5 Numeracy and Lifeskills Mathematics, and National 4 and 5 Mathematics

Recording tables have been included in most Unit assessment support packs for National 3–5 Numeracy and Lifeskills Mathematics, and National 4 and 5 Mathematics to help assessors make judgements using the assessments provided. These recording tables are found, along with other guidance on how to make assessment judgements for the relevant Unit(s), in the 'Evidence' section of each pack. Each recording table may be used as an alternative candidate assessment record, or as a supplementary one.

There are broadly three different types of recording table, each one designed to suit the assessments to which it applies. Examples of the three different types are provided below, with introductory text that explains how the table can help assessors to recognise when Assessment Standards have been met, and to record achievement. Each one has been completed and is accompanied by annotation to demonstrate how that table type can be used.

Numeracy packs table (a similar table is used for National 3 Lifeskills Mathematics)

This table is provided to help assessors record achievement when using the assessment for candidates in Appendix 1 of that Unit assessment support pack, by recording in the appropriate unshaded blank cell the number of questions or question parts answered successfully. This record can then be used to determine whether each Assessment Standard has been met, according to the requirements indicated, and a tick placed at the foot of the relevant column when this occurs. Details of where each Assessment Standard occurs in each assessment are given in the recording tables.

An example of a Numeracy recording table is shown on the next page. This has been taken from the Unit assessment support pack for H225 73 *Numeracy* (National 4): *Unit-by-Unit approach using a travel and tourism context*. When using this National 4 Numeracy recording table, assessors could mark the assessment and then check that the criteria for meeting each Assessment Standard have been met:

ie:

- For Assessment Standard 1.2, that the candidate has carried out calculations correctly in at least **half** of the total opportunities.

- For the other Assessment Standards, that the candidate has:

1.1 selected/used appropriate units on at least **one** occasion for **each** of the following: money, time and measurement
1.3 recorded measurements using a straightforward scale on an instrument on at least **one** occasion
1.4 interpreted measurements **and** results of calculations to make decisions on at least **one** occasion for each
1.5 explained decisions based on the results of measurements or calculations on at least **one** occasion
2.1 extracted and interpreted data from at least **two** different straightforward graphical forms
2.2 made and explained decisions based on the interpretation of data on at least **one** occasion
2.3 made and explained decisions based on probability on at least **one** occasion

In this example, the candidate has met all Assessment Standards except 1.3 and 2.1.

Question	Assessment Standards														
	1.1			1.2					1.3	1.4		1.5	2.1	2.2	2.3
	Money	Time	Meas.	Whole numbers	Fractions	Decimal fractions	Whole number percentages	Ratio and proportion		Meas	Calc				
1 (a)				There are opportunities for calculations of all of the above throughout this assessment.											
1 (b)											✓				
1 (c)	✓												✓		
1 (d)														✓	
2 (a)															
2 (b)															
2 (c)		✓													
3 (a)															
3 (b)															
3 (c)			✓												
4 (a)															
4 (b)															
4 (c)															
5 (a)															
5 (b)															
5 (c)															✓
6 (a)										✓					
6 (b)												✓			
Required to meet the relevant AS	1/3	1/1	1/6	The candidate has carried out calculations correctly in at least half of the **total** opportunities.					1/1	1/1	1/2	1/2	*2/9	1/2	1/2
AS met (✓)	✓	✓	✓	✓						✓		✓		✓	✓

For Assessment Standard 1.1: The candidate must have selected/used appropriate numerical notation for calculations and/or recording measurements on at least **one** occasion for **each** of the following: money, time and measurement.
*The candidate has extracted and interpreted data from **two** different graphical forms correctly.

National 4 and 5 Mathematics (Unit-by-Unit), and National 4 and 5 Lifeskills Mathematics (all approaches) packs table

This table type is provided to help assessors' record achievement when using the assessment for candidates in Appendix 1 of that Unit assessment support pack, by recording in the appropriate **unshaded blank cell** the number of points of process and accuracy/reasoning (Mathematics)/strategy/process/communication (Lifeskills Mathematics) that were correct for that question or question part. This record can then be used to determine whether each Assessment Standard has been met, according to the requirements indicated, and a tick placed at the foot of the relevant column when this occurs.

An example of this table type is shown on the next page. This has been taken from the Unit assessment support pack for H22F 74 *Mathematics: Expressions and Formulae* (National 4): *Unit-by-Unit approach*.

With this type of recording table, to meet the relevant Assessment Standard, candidates must:

- be correct in a minimum number of the main points of process and accuracy/reasoning (Mathematics)/strategy/process/communication (Lifeskills Mathematics) across relevant questions, **as described in each table**

The main points of process and accuracy/reasoning (Mathematics)/strategy/process/communication (Lifeskills Mathematics) for the assessment in that Unit assessment support pack are detailed at the end of the 'Evidence' section.

In this example, the candidate has met most of the Assessment Standards, but not Assessment Standard 1.2.

Please note that the 'This candidate's results' row has been inserted in this example for additional clarification.

Questions	Assessment Standards									
	1.1		1.2		1.3		2.1		2.2	
	Points available	Points gained	Points available	Points gained	Points available	Points gained	Points available	Points gained	Points available	Points gained
1 (a)	1	1								
1 (b)	2	1								
2	2	0								
3	1	1								
4 (a)	2	1								
4 (b)	2	2								
5 (a)	2	0								
5 (b)	2	2								
5 (c)	1	1					#1	1		
6 (a)	1	1								
6 (b)									#1	0
7 (a)			2	0						
7 (b)			2	2						
8			2	1						
9			2	1						
10			2	0						
11							#1	0		
12					2	2				
13 (a)					2	2				
13 (b)					1	1				
13 (c)									#1	1
14					3	2				
15					1	0				
Required to meet relevant AS	At least 8/16	10	At least 5/10	4	At least 5/9	7	At least 1/2	1	At least 1/2	1
This candidate's results	10/16		4/10		7/9		1/2		1/2	
AS met (✓)	✓				✓		✓		✓	

#: Each # illustrates one opportunity to demonstrate reasoning. To meet the Assessment Standard this need only be demonstrated once, although this assessment offers two opportunities to do this.

National 4 and 5 Mathematics (combined approach) packs table

This table type is provided to help assessors' record achievement when using the assessment for candidates in Appendix 1 in that Unit assessment support pack, by recording in the appropriate **unshaded blank cell** the number of sub-skills demonstrated. This record can then be used to determine whether each Assessment Standard has been met, according to the requirements indicated, and a tick placed in the relevant cell of the far right column when this occurs.

With this type of recording table, to meet each Assessment Standard in Outcome 1, candidates must successfully demonstrate at least half of the total number of sub-skills within that Assessment Standard. If a sub-skill has not been tested, it still counts towards the total.

Assessment Standards 2.1 and 2.2 each require the skill of reasoning to be demonstrated on at least one occasion.

For Outcome 1, to demonstrate a sub-skill, candidates must answer a question successfully by being correct in **more than half** of the main points of process and accuracy for that question. The main points of process and accuracy/reasoning for the assessment in that Unit assessment support pack are detailed at the end of the 'Evidence' section.

An example of this table type is shown on the next four pages. This has been taken from the Unit assessment support pack *National 4 Mathematics: combined approach*.

In this example, the candidate has met most of the Assessment Standards, but not Assessment Standard Expressions and Formulae (EF) 1.3 or EF 2.2.

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Assessment Standard	**Expressions and Formulae Unit Sub-skills**	1a	1b	1e		**No. of sub-skills required to meet the Assessment Standard**	**Assessment Standard met (✓)**
EF1.1 Applying algebraic skills to manipulating expressions and working with formulae	using the distributive law in an expression with a numerical common factor to produce a sum of terms	✓				3/6	4
	factorising a sum of terms with a numerical common factor	✓					✓
	simplifying an expression which has more than one variable						
	evaluating an expression or a formula which has more than one variable		✓				
	extending a straightforward number or diagrammatic pattern and determining its formula			✓			
	calculating the gradient of a straight line from horizontal and vertical distances						
Assessment Standard	**Expressions and Formulae Unit Sub-skills**	2a	2b(i)	2c	2f (ii)	**No. of sub-skills required to meet the Assessment Standard**	**Assessment Standard met (✓)**
EF1.2 Applying geometric skills to circumference, area and volume	calculating the circumference and area of a circle	✓	✓			3/5	3
	calculating the area of a parallelogram, kite, trapezium						✓
	investigating the surface of a prism			✓			
	calculating the volume of a prism				✓		
	using rotational symmetry						

Assessment Standard	**Expressions and Formulae Unit Sub-skills**	3d	3e	3f		**No. of sub-skills required to meet the Assessment Standard**	**Assessment Standard met (✓)**
EF1.3 Applying statistical skills to representing and analysing data and to probability	Constructing a frequency table with class intervals from raw data		✓			3/5	2
	Determining statistics of a data set	✓					
	Interpreting calculated statistics						
	Representing raw data in a pie chart						
	Using probability						
Assessment Standard	**Expressions and Formulae Unit Sub-skills**	2b(ii)				**No. of sub-skills required to meet the Assessment Standard**	**Assessment Standard met (✓)**
EF2.1 Interpreting a situation where mathematics can be used and identifying a valid strategy	Requires analysis of mathematical situation	✓				1 of 2 opportunities	1 ✓
EF2.2 Explaining a solution and/or relating it to context	Requires explanation of the solution given or demonstrates understanding of context					1 of 2 opportunities	0

Assessment Standard	**Relationships Unit Sub-skills**	1d	1f			**No. of sub-skills required to meet the Assessment Standard**	**Assessment Standard met (✓)**
R1.1 Applying algebraic skills to linear equations	Drawing and recognising a graph of a linear equation	✓				2/3	2
	Solving linear equations						
	Changing the subject of a formula		✓				✓
Assessment Standard	**Relationships Unit Sub-skills**	2g(i)	2k			**No. of sub-skills required to meet the Assessment Standard**	**Assessment Standard met (✓)**
R1.2 Applying geometric skills to sides and angles of shapes	Using Pythagoras' Theorem	✓				2/3	2
	Using a fractional scale factor to enlarge or reduce a shape		✓				✓
	Using parallel lines, symmetry and circle properties to calculate angles						
Assessment Standard	**Relationships Unit Sub-skills**	2g(ii)				**No. of sub-skills required to meet the Assessment Standard**	**Assessment Standard met (✓)**
R1.3 Applying trigonometric skills to right-angled triangles	Calculating a side in a right-angled triangle					1/2	1
	Calculating an angle in a right-angled triangle	✓					✓

Assessment Standard	**Relationships Unit Sub-skills**	3a	3b			**No. of sub-skills required to meet the Assessment Standard**	**Assessment Standard met (✓)**
R1.4 Applying statistical skills to representing data	Constructing a scattergraph	✓				1/2	2 ✓
	Drawing and applying a best-fitting straight line		✓				
Assessment Standard	**Relationships Unit Sub-skills**	1g		2g(ii)		**No. of sub-skills required to meet the Assessment Standard**	**Assessment Standard met (✓)**
R2.1 Interpreting a situation where mathematics can be used and identifying a valid strategy	Requires analysis of mathematical situation	✓		✓		1 of 2 opportunities	2 ✓
Assessment Standard	**Relationships Unit Sub-skills**	1g		2g (ii)		**No. of sub-skills required to meet the Assessment Standard**	**Assessment Standard met (✓)**
R2.2 Explaining a solution and/or relating it to context	Requires explanation of the solution given or demonstrates understanding of context	✓				1 of 2 opportunities	1 ✓