PEARSON EDEXCEL FUNCTIONAL SKILLS MATHEMATICS
MARK SCHEME – LEVEL 1 PRACTICE SET 2

Marking Guidance for Functional Skills Mathematics Level 1

General

- All learners must receive the same treatment. Examiners must mark the first learner in exactly the same way as they mark the last.
- Where some judgement is required, mark schemes will provide the principles by which marks will be awarded; exemplification will not be exhaustive. When examiners are in doubt regarding the application of the mark scheme, the response should be escalated to a senior examiner to review.
- Mark schemes should be applied positively. Learners must be rewarded for what they have shown they can do rather than penalised for omissions.
- All the marks on the mark scheme are designed to be awarded. Examiners should always award full marks if deserved, i.e. if the answer matches the mark scheme. Examiners should also be prepared to award zero marks if the learner's response is not worthy of credit according to the mark scheme. If there is a wrong answer (or no answer) indicated in the answer box, always check the working in the body of the script (and on any diagrams), and award any marks appropriate from the mark scheme.
- Working is always expected. For short questions, where working may not be seen, correct answers may still be awarded full marks. For longer questions, an answer in brackets from the mark scheme seen in the body of the working, implies a correct process and the appropriate marks may be awarded.
- **Questions that specifically state that working is required**: learners who do not show working will get no marks – full details will be given in the mark scheme for each individual question.

Applying the Mark Scheme

- The mark scheme has a column for **Process** and a column for **Evidence**. In most questions the majority of marks are awarded for the process the learner uses to reach an answer. The evidence column shows the *most likely* examples that will be seen. If the learner gives different evidence valid for the process, examiners should award the mark(s).
- If working **is crossed out and still legible**, then it should be marked, as long as it has not been replaced by alternative work.
- If there is a **choice of methods** shown, then mark the work leading to the answer given in the answer box or working box. If there is no definitive answer then marks should be awarded for the lowest scoring method shown.
- A suspected **misread**, e.g. 528 instead of 523, may still gain process marks provided the question has not been simplified. Examiners should send any instance of a suspected misread to a senior examiner to review.
- It may be appropriate to **ignore subsequent work (isw)** when the learner's additional work does not change the meaning of their answer.

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- **Correct** working followed by an **incorrect decision** may be seen, showing that the learner can calculate but does not understand the functional demand of the question. The mark scheme will make clear how to mark these questions.
- **Transcription** errors occur when the learner presents a correct answer in working, and writes it incorrectly on the answer box e.g. 698 in the body and 689 in the answer box; mark the better answer if clearly only a transcription error. Examiners should send any instance of transcriptions errors to a senior examiner to review.
- **Incorrect method** if it is clear from the working that the correct answer has been obtained from incorrect working, award 0 marks. Examiners must escalate the response to a senior examiner to review.
- **Follow through marks (ft)** must only be awarded when explicitly allowed in the mark scheme. Where the process uses the learner's answer from a previous step, this is clearly shown.
  - Speech marks are used to show that previously incorrect numerical work is being followed through, for example '240' means their 240 coming from a correct or set of correct processes.
  - When words are used in { } then this value does not need to come from a correct process but should be the value the learner believes to be required. The constraints on this value will be detailed in the mark scheme. For example, {volume} means the figure may not come from a correct process but is clearly the value learners believe should be used as the volume.
- Marks can usually be awarded where units are not shown. Where units are required this will be stated. For example, 5(m) indicates that the units do not have to be stated for the mark to be awarded.
- Learners may present their answers or working in many **equivalent** ways. This is denoted oe in the mark scheme. Repeated addition for multiplication and repeated subtraction for division are common alternative approaches. The mark scheme will specify the minimum required to award these marks.
- A **range** of answers is often allowed, when a range of answers is given e.g. [12.5, 13] this is the inclusive closed interval.
- **Accuracy** of figures. Accept an answer which has been rounded or truncated from the correct figure unless other guidance is given. For example, for 12.66.. accept 12.6, 12.7, 12.66, 12.67 or any other more accurate figure.
- **Probability** answers must be given as a fraction, percentage or decimal. If a learner gives a decimal equivalent to a probability, this should be written to at least 2 decimal places (unless tenths). If a learner gives the answer as a percentage a % must be used. Incorrect notation should lose the accuracy marks, but be awarded any implied process marks. If a probability fraction is given then cancelled incorrectly, ignore the incorrectly cancelled answer.
- **Graphs.** A linear scale must be linear in the range where data is plotted, and use consistent intervals. The scale may not start at 0 and not all intervals must be labelled. The minimum requirements will be given, but examiners should give credit if a title is given which makes the label obvious.

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Section A (Non-Calculator)

PMAT1/N02				
Question	**Process**	**Mark**	**Mark Grid**	**Evidence**
Q1	Accurate figure	1	A	8968
	Full process to find amount for each project	1 or	B	'8968' ÷ 8 (=1121) oe
	Accurate figure	2	BC	1121
	Total marks for question	**3**		

Question	**Process**	**Mark**	**Mark Grid**	**Evidence**
Q2	Begins to use the rule	1 or	A	3 × 45 (=135) oe
	Complete process to use the rule	2 or	AB	'135' + 20 (=155) oe
	Accurate figure	3	ABC	155
	Total marks for question	**3**		

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Question	Process	Mark	Mark Grid	Evidence
Q3	Complete process to find volume	1	A	$20 \times 5 \times 8$ (=800)
	Process to work with fraction	1	B	$3 \div 4$ (=0.75)
	Process to convert units	1 or	C	{volume} ÷ 1000 (=0.8) **OR** '0.75' × 1000 (=750)
	Valid decision with accurate figures	2	CD	e.g. Yes **AND** 800 **and** 750 **OR** Yes **AND** 0.8 **and** 0.75 NB working must be shown
	Total marks for question	**4**		

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Question	Process	Mark	Mark Grid	Evidence
Q4(a)	Process to work with range	1 or	A	47.25 – 6.3(0) (=40.95) **OR** 6.3(0) to 47.25 oe
	Accurate figure	2	AB	40.95
Q4(b)	Complete process to find 15% discount	1 or	C	15 ÷ 100 × 34 (=5.1) oe
	Accurate figure to 2 dp	2	CD	5.10
	Total marks for question	**4**		

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Section B (Calculator)

PMAT1/C02				
Question	**Process**	**Mark**	**Mark Grid**	**Evidence**
Q1	Begins to work with time	1 or	A	e.g. 12.50 – 9.30 (=3 hrs 20 mins) oe **OR** 60 ÷ 12 (=5) **OR** Begins build to at least 10.06 am e.g. 9.42, 9.54, 10.06
	Full process to find the number of pots decorated	2 or	B	e.g. 60 × '3' ÷ 12 (=15) **OR** 3 hrs 20 mins – 20 mins (=3) **and** '5' × '3' (=15)
	Accurate figure	3	BC	15
	Total marks for question	**3**		

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Question	Process	Mark	Mark Grid	Evidence
Q2	Process to work with percentage or work with fraction or convert to common format	1 or	A	e.g. 20 ÷ 100 × 40 (=8) **OR** 40 ÷ 4 (=10) **OR** $\frac{1}{4}$ = 25% oe
	Process to work with percentage and fraction or work with common format	2 or	AB	e.g. 20 ÷ 100 × 40 (=8) **and** 40 ÷ 4 (=10) **OR** 100 – '25' – 20 (=55) oe
	Full process to find remaining pages	3 or	ABC	e.g. 40 – '8' – '10' (=22) **OR** '55' ÷ 100 × 40 (=22) oe
	Accurate figure	4	ABCD	22
	Total marks for question	**4**		

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Question	Process	Mark	Mark Grid	Evidence
Q3	Converts units	1	A	e.g. 0.9 (m) or 1200 (mm) or 650 (mm) or 450 (mm) May be seen in subsequent working
	Begins to work with perimeter or deals with the doorway or fireplace	1 or	B	6.5 + 4.5 + 6.5 + 4.5 (=22) oe **OR** 4.5 – '0.9' (=3.6) **OR** 6.5 – '1.2' (=5.3) **OR**
	Full process to find total length required or total number of lengths required	2	BC	e.g. 6.5 + 4.5 + 5.3 + 3.6 (=19.9) **OR** '22' – '0.9' – '1.2' (=19.9) **OR** '2.7..' + '1.875' + '1.5' + '2.2..' (=8.29..)
	Process to find the number of lengths of skirting board required	1 or	D	e.g. '19.9' ÷ 2.4 (=8.29..) **OR** 6.5 ÷ 2.4 (=2.708..)
	Accurate figure	2	DE	9 NB working must be shown
	Total marks for question	**5**		

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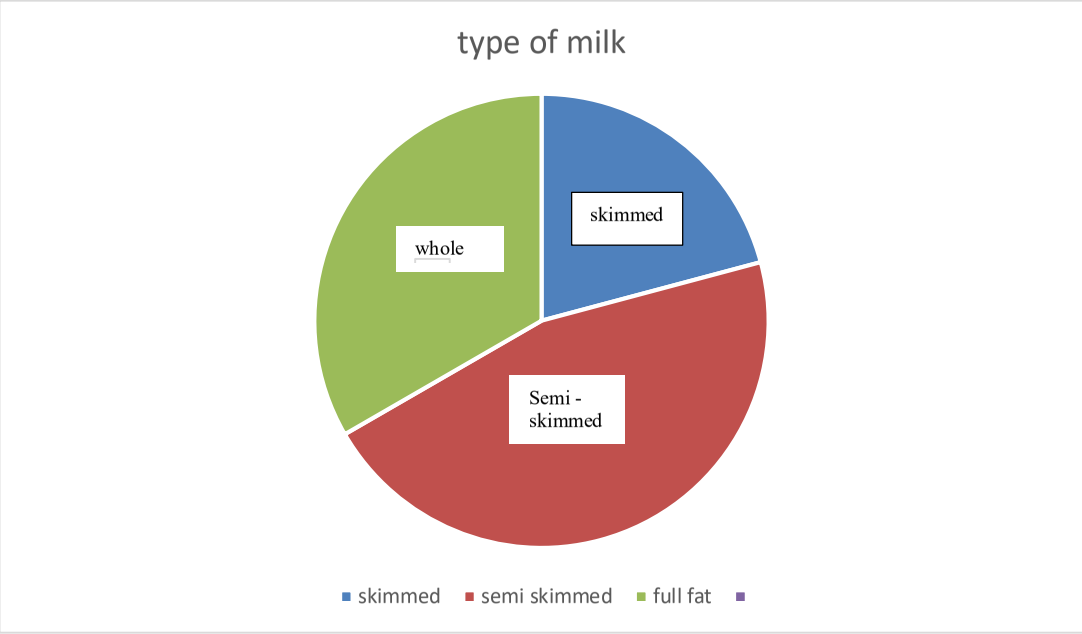
Question	Process	Mark	Mark Grid	Evidence
Q4	Begins to draw pie chart	1 or	A	One angle drawn correctly Allow ± 2°
	Improves pie chart	2 or	AB	Fully accurate pie chart with no labels **OR** Two sectors accurately drawn and labelled
	Accurate labelled pie chart drawn	3	ABC	Fully correct pie chart with labels.
Total marks for question		**3**		



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Question	Process	Mark	Mark Grid	Evidence
Q5(a)	Correct answer	1	A	Any hexagon drawn
Q5(b)	Correct answer	1	B	5
Q5(c)	Valid selection	1	C	acute
	Total marks for question	**3**		

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<table>
<tr><th>Question</th><th>Process</th><th>Mark</th><th>Mark Grid</th><th>Evidence</th></tr>
<tr><td rowspan="3">Q6(a)</td><td>Process to show groups</td><td>1</td><td>A</td><td>Labels all missing groups
e.g. 21 to 40, 41 to 60, 61 to 80, 81 to 100</td></tr>
<tr><td>Begins to place data into table</td><td>1 or</td><td>B</td><td>Populates table with at least 2 correct frequencies for their groups.</td></tr>
<tr><td>Correctly completed table</td><td>2</td><td>BC</td><td>Populates table with the data correctly
<table><tr><td>grass (%)</td><td>tally</td><td>frequency</td></tr><tr><td>1 to 20</td><td>I</td><td>1</td></tr><tr><td>21 to 40</td><td>III</td><td>3</td></tr><tr><td>41 to 60</td><td>III</td><td>3</td></tr><tr><td>61 to 80</td><td>III</td><td>3</td></tr><tr><td>81 to 100</td><td>II</td><td>2</td></tr><tr><td></td><td>total</td><td>12</td></tr></table>NB Condone missing or incorrect tallies as long as frequency is correct</td></tr>
<tr><td rowspan="3">Q6(b)</td><td>Begins to draw suitable chart</td><td>1 or</td><td>D</td><td>One of
Linear scale (y-axis), labels, correct frequencies</td></tr>
<tr><td>Improves solution</td><td>2 or</td><td>DE</td><td>two of
Linear scale (y-axis), labels, correct frequencies</td></tr>
<tr><td>Correct suitable chart</td><td>3</td><td>DEF</td><td>All of
Linear scale (y-axis), labels, correct frequencies AND
Scale must be sensible (use at least half the height of the grid)
Minimum labels frequency, 0-9, 10-19, 20-29, 30-39, 40-49 number of bottles</td></tr>
<tr><td colspan="2">Total marks for question</td><td>6</td><td colspan="2"></td></tr>
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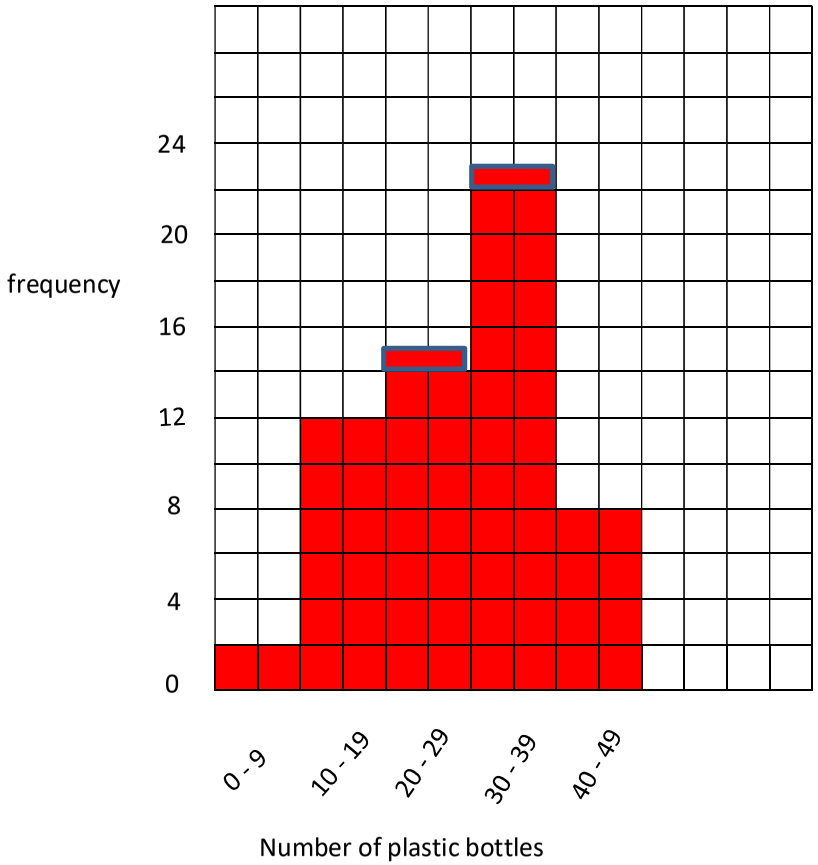

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	Process	Mark	Mark Grid	Evidence
Q7(a)	Accurate figure	1	A	8
Q7(b)	Selects correct elevation	1	B	2
Q7(c)	Selects correct elevation	1	C	4
	Total marks for question	**3**		

Question	Process	Mark	Mark Grid	Evidence
Q8(a)	Works with simple ratio	1 or	A	e.g. 56 ÷ 8 (=7) **OR** 1:8, 2:16, 3:24, 4:32, 5:40, 6:48
	Accurate figure	2	AB	7
Q8(b)	Valid check by reverse calculation	1	C	e.g. 8 × 7 = 56
	Total marks for question	**3**		

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Question	Process	Mark	Mark Grid	Evidence
Q9(a)	Begins to work with mean	1 or	A	7.6 + 6.25 + 5.85 + 6.65 + 8 (=34.35) **OR** 6.85 × 5 (=34.25)
	Full process to find figures to compare	2 or	AB	'34.35' ÷ 5 (=6.87) **OR** 7.6 + 6.25 + 5.85 + 6.65 + 8 (=34.35) **and** 6.85 × 5 (=34.25)
	Valid decision with accurate figures	3	ABC	No **AND** (£)6.87 **OR** No **AND** (£)34.35 **and** (£)34.25
Q9(b)	Valid check by estimation	1	D	e.g. (8 + 6 + 6 + 7 + 8) ÷ 5 = 7 **OR** 7 × 5 = 35 **OR** 8 + 6 + 6 + 7 + 8 = 35
	Total marks for question	**4**		

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Question	Process	Mark	Mark Grid	Evidence
Q10	Begins to work with percentage or difference	1 or	A	1260 ÷ 100 × 5 (=63) oe **OR** 1300 – 1260 (=40) **OR** (100 + 5) ÷ 100 (=1.05)
	Full process to find figures to compare	2 or	AB	1260 + '63' (=1323) oe **OR** 1260 ÷ 100 × 5 (=63) **and** 1300 – 1260 (=40)
	Valid decision with accurate figure(s)	3	ABC	Yes **AND** 1323 **OR** Yes **AND** 63 **and** 40
	Total marks for question	**3**		

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Question	Process	Mark	Mark Grid	Evidence
Q11	Process to find a missing dimension	1	A	9 – 4 (=5) **or** 8 – 3.5 (=4.5)
	Begins to work with area	1 or	B	9 × 8 (=72) **or** 3.5 × 4 (=14) **or** 3.5 × '5' (=17.5) **or** 9 × '4.5' (=40.5) **or** '5' × '4.5' (=22.5) **or** 8 × 4 (=32)
	Full process to find total area or total cost	2	BC	e.g. (9 × 8) – (3.5 × '5') (=54.5) **OR** (3.5 × 4) + (9 × '4.5') (=54.5) **OR** ('5' × '4.5') + (8 × 4) (=54.5) **OR** '360' + '512' (=872)
	Begins to work with cost	1 or	D	e.g. '54.5' × 16 (= 872) **OR** '32' × 16 (=512) **OR** 800 ÷ 16 (=50)
	Valid decision with accurate figures	2	DE	Yes **AND** (£)872 **OR** Yes **AND** 54.5(m²) **and** 50(m²)
	Total marks for question	**5**		