Comparison of key skills specifications 2000/2002 with 2004 standardsX015461July 2004Issue 1

**Mark Scheme**

Mock Set 2

Pearson Edexcel GCSE Mathematics (1MA1)

Foundation Tier (Non-Calculator)

Paper 1F

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**General marking guidance**

These notes offer general guidance, but the specific notes for examiners appertaining to individual questions take precedence.

**1** All candidates must receive the same treatment. Examiners must mark the last candidate in exactly the same way as they mark the first.

Where some judgement is required, mark schemes will provide the principles by which marks will be awarded; exemplification/indicative content will not be exhaustive. When examiners are in doubt regarding the application of the mark scheme to a candidate’s response, the response should be sent to review.

**2** All the marks on the mark scheme are designed to be awarded; mark schemes should be applied positively. Examiners should also be prepared to award zero marks if the candidate’s response is not worthy of credit according to the mark scheme. If there is a wrong answer (or no answer) indicated on the answer line always check the working in the body of the script (and on any diagrams), and award any marks appropriate from the mark scheme.

**Questions where working is not required**: In general, the correct answer should be given full marks.

**Questions that specifically require working**: In general, candidates who do not show working on this type of question will get no marks – full details will be given in the mark scheme for each individual question.

**3 Crossed out work**

This should be marked **unless** the candidate has replaced it with an alternative response.

**4 Choice of method**

If there is a choice of methods shown, mark the method that leads to the answer given on the answer line.

If no answer appears on the answer line, mark both methods **then award the lower number of marks.**

**5** **Incorrect method**

If it is clear from the working that the “correct” answer has been obtained from incorrect working, award 0 marks. Send the response to review for your Team Leader to check.

**6** **Follow through marks**

Follow through marks which involve a single stage calculation can be awarded without working as you can check the answer, but if ambiguous do not award.

Follow through marks which involve more than one stage of calculation can only be awarded on sight of the relevant working, even if it appears obvious that there is only one way you could get the answer given.

**7** **Ignoring subsequent work**

It is appropriate to ignore subsequent work when the additional work does not change the answer in a way that is inappropriate for the question or its context. (eg. an incorrectly cancelled fraction when the unsimplified fraction would gain full marks).

It is not appropriate to ignore subsequent work when the additional work essentially makes the answer incorrect (eg. incorrect algebraic simplification).

**8** **Probability**

Probability answers must be given as a fraction, percentage or decimal. If a candidate gives a decimal equivalent to a probability, this should be written to at least 2 decimal places (unless tenths).

Incorrect notation should lose the accuracy marks, but be awarded any implied method marks.

If a probability answer is given on the answer line using both incorrect and correct notation, award the marks.

If a probability fraction is given then cancelled incorrectly, ignore the incorrectly cancelled answer.

**9** **Linear equations**

Unless indicated otherwise in the mark scheme, full marks can be gained if the solution alone is given on the answer line, or otherwise unambiguously identified in working (without contradiction elsewhere). Where the correct solution only is shown substituted, but not identified as the solution, the accuracy mark is lost but any method marks can be awarded (embedded answers).

**10 Range of answers**

Unless otherwise stated, when an answer is given as a range (e.g 3.5 – 4.2) then this is inclusive of the end points (e.g 3.5, 4.2) and all numbers within the range.

|  |
| --- |
| **Guidance on the use of abbreviations within this mark scheme** |
| **M** method mark awarded for a correct method or partial method  **P** process mark awarded for a correct process as part of a problem solving question  **A** accuracy mark (awarded after a correct method or process; if no method or process is seen then full marks for the question are implied but see individual mark schemes for more details)  **C** communication mark  **B** unconditional accuracy mark (no method needed)  **oe** or equivalent  **cao** correct answer only  **ft** follow through (when appropriate as per mark scheme)  **sc** special case  **dep** dependent (on a previous mark)  **indep** independent  **awrt** answer which rounds to  **isw** ignore subsequent working |

**Foundation tier Paper 1F (Non-calculator): Mock (Set 2) Mark Scheme**

| **Question** | | **Working** | **Answer** | **Mark** | **Notes** |
| --- | --- | --- | --- | --- | --- |
| 1 | (a) |  | −10,−7,−5,0,4 | B1 | cao |
|  | (b) |  | 0.2, 0.205, 0.25, 0.52 | B1 | cao |
| 2 |  |  | 70 | B1 | cao |
| 3 |  |  | 5.55 | B1 | cao |
| 4 |  |  | 210 | B1 | cao |
| 5 |  |  | 33 | B1 | cao |
| 6 |  |  | statement | C1 | e.g. no labels on horizontal axis |
|  |  |  | statement | C1 | e.g. no 0 on vertical axis |
|  |  |  | statement | C1 | e.g. middle column incorrect height |
| 7 | (a) |  | 15 | M1  A1 | for method to find rate of pay, e.g. 120 ÷ 8  cao |
|  | (b) |  | 110 | M1  M1  A1 | for method to find total for last 3 days, e.g. 550 − (120 + 100) (= 330)  shows the need to find the amount for one day (e.g. ÷3)  cao |
| 8 | (a) |  | example | B1 | e.g. 3 + 8 = 11 |
|  | (b) |  | example | B1 | e.g. 2 × 7 = 14 |
|  | (c) |  | example | B1 | e.g. 9 × 9 = 81 |
| 9 |  |  | Decor U | P1 | for process to find an area as a first step, e.g. 4 × 9 (= 36) |
|  |  |  |  | P1 | (dep P1) for process to find the number of tins for one store, e.g. 36 ÷ 12 (3 tins) or 36 ÷ 10 (4 tins) |
|  |  |  |  | P1 | for process to find the costs for both, e.g. “3” × £3.70 and “4” × £3 where the number of tins (“3” or “4”) is an integer |
|  |  |  |  | A1 | states Decor U and giving costs as 11.10 and 12 |
| 10 | (a) |  | 5 | B1 | cao |
|  | (b) |  | 7 | M1 | starts to find number using inverse operations (oe), e.g. use of ÷ 2 or + 3 |
|  |  |  |  | A1 | cao |
|  | (c) |  | 3 | M1 | starts to find the number by using inverse operations with own values or algebraic expressions, e.g. use of ÷ 2 and + 3; e.g. 2*x* − 3 |
|  |  |  |  | A1 | cao |
| 11 | (a) |  | 1300 | B1 | cao |
|  | (b) |  | 4 - 5 | B1 |  |
|  | (c) |  | 1.4 | M1 | for taking readings from graph, e.g. 0.6 or 2 or finds the difference from their readings |
|  |  |  |  | A1 | cao |
|  | (d) |  | graph | B1 | for showing a horizontal line from (13 40, 3.5) to (13 50, 3.5) |
|  |  |  |  | B1 | for a line that terminates at (14 15,0) and starts from (13 50, 3.5) or starts from the end of their graph so far, e.g. from (13 40, 3.5) |
| 12 | (a) |  | £630 | P1 | uses some estimation, e.g. states 90 or 700 or 800 or 100 |
|  |  |  |  | P1 | starts process of multiplication using estimates, e.g. 90 × 700 |
|  |  |  |  | A1 | cao accept 63000p |
|  | (b) |  | reasoning | C1 | gives an answer based on their calculations, e.g. over-estimate since figures have been rounded up |
| 13 |  |  | 5 : 6 | M1 | starts by writing as a ratio, e.g. 100 : 120 or gives the simplified answer incorrectly, e.g. 6 : 5; 5,6 |
|  |  |  |  | A1 | cao |
| 14 |  |  | 0.9 | M1 | starts method by multiplying lates by freq.,  e.g. 0 × 15, 1 × 8, 2 × 3 etc. or sight of at least three of 0,8,6,9,4 (could be next to table) |
|  |  |  |  | M1 | (dep M1) shows ∑*fx* ÷ ∑*f*, e.g. 27 ÷ 30 |
|  |  |  |  | A1 | cao SC B2 for 1.4 |
| 15 |  |  | 160 | P1 | process to find the cost of paprika, e.g. 210 ÷ 7 (= 30) |
|  |  |  |  | P1 | process to find the cost of sage, e.g. (290 – (3 × (210 ÷ 7))) ÷ 4 (= 50) |
|  |  |  |  | P1 | (dep P2) process to find the required cost ,  e.g. 2 × “30” + 2 × “50” or 2 × (“30” + “50” |
|  |  |  |  | A1 | cao |
| 16 | (a) |  | 23.6 | P1 | shows a start to the process, e.g. finds the area of the base (e.g. 50 × 100 = 5000) or shows the volume as 300 000 or 100 × 50 × *h* = 18000 |
|  |  |  |  | P1 | shows a process to find the depth, e.g. dividing 18000 by the base area, e.g. 18000 ÷ (50 × 100) or an equivalent method to find the depth (= 3.6) |
|  |  |  |  | P1 | process to find 1/3 of 60 or 1/3 of a volume, e.g. 60 ÷ 3 (= 20) |
|  |  |  |  | A1 | cao |
|  | (b) |  | less | C1 | explanation that the depth of water will be less |
| 17 | (a) |  | 3 in Q | B1 | the figure 3 is correctly placed |
|  |  |  | 6 in middle | B1 | the figure 6 is correctly placed |
|  | (b) |  |  | M1 | for writing 7/*a* (*a* ≠ 11, *a* > 7) or *b*/11 (*b* ≠ 7, b < 11) (ft) |
|  |  |  |  | A1 | for 7/11 (cao or ft from their Venn diagram) oe |
| 18 |  |  | Ali 80 | M1 | starts with a first step , e.g. 280 ÷ (2 + 5) (= 40) |
|  |  |  | Beth 200 | A1 | cao |
| 19 |  |  | 71° | M1 | finds an angle using parallel lines, e.g. *BEF* as 38° or *EAB* as *x*. |
|  |  |  |  | M1 | shows a complete process to arrive at the required angle  could be evidenced by angles shown on the diagram |
|  |  |  |  | A1 | cao |
|  |  |  |  | C1 | alternate, corresponding or allied (co-interior) unambiguously given *and*  *appropriate for their working* |
|  |  |  |  | C1 | all other reasons given, e.g. Angles on a straight line add up to 180, Angles in a triangle add up to 180, Base angles of an isosceles triangle are equal *and*  *appropriate for their working* |
| 20 |  |  | 3*x* + 1 | P1 | process to start to problem, e.g. states perimeter algebraically, e.g. 2*x* + 3 + 5*x* – 2 + 5*x* + 3 |
|  |  |  |  | P1 | (dep P1) continues process, e.g. simplifies to 12*x* + 4 or divides their linear expression (linked to perimeter) by 4 |
|  |  |  |  | A1 | cao |
| 21 |  |  | No with correct figures | P1 | starts process e.g. starts to find volume by showing how to find a prism which is part of the shape, or shows how to find the complete cross-sectional area, e.g. (1 × 10 × 10) or (½ × 2 × 5) + (1 × 15) (= 20) |
|  |  |  |  | P1 | (dep P1) complete process shown to find the vol of the pool (= 200 m3) |
|  |  |  |  | P1 | process to convert between litres and cm3, e.g. 1 cm3 = 100 000 litres or 200 000 litres |
|  |  |  |  | A1 | time taken, e.g. 40 000 sec, 666.66.. minutes, 11.11.. hours |
|  |  |  |  | C1 | comparison with correct comparable figures used, e.g. 36 000 < 40 000, 600 < 666.66…, or 11.11… (10 given) |
| 22 | (a) |  | 20 | M1 | for complete proportion statement, e.g. 12 × 5 ÷ 3 oe |
|  |  |  |  | A1 | cao |
|  | (b)i |  | statement | C1 | eg work rate of each man is the same / does not change over time |
|  | ii |  | statement | C1 | eg if rate slower it takes longer / rate faster takes less time ie needs to refer to how the rate changes |
| 23 | (a) |  | complete | B1 | 1/6, 5/6 shown on left hand branches, |
|  |  |  | tree diagram | B1 | 1/8, 7/8, 1/8, 7/8 shown on right hand branches |
|  | (b) |  |  | M1 | oe (or ft their tree diagram, dep on having probabilities shown) |
|  |  |  |  | A1 | oe (or ft tree diagram, dep on having probabilities shown) |
| 24 | (a) |  | 66 | B1 | cao |
|  | (b) |  | 77 | B1 | cao |
| 25 |  |  | 8 × 104 | B1 | cao |