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

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Mark Scheme

Mock Paper – Set 1

Pearson Edexcel GCSE

In Mathematics (1MA1)

Foundation (Non-Calculator) Paper 2F

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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 then mark both methods **as far as they are identical** and award these 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.

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| **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 |

**Mark scheme GCSE (9 – 1) Mathematics**

| **Mock Paper 1MA1: 2F** | | | | | |
| --- | --- | --- | --- | --- | --- |
| **Question** | | **Working** | **Answer** | **Mark** | **Notes** |
| 1 |  |  | 4.913 | 1 | B1 cao |
| 2 |  |  | 2:3 | 1 | B1 cao |
| 3 |  |  | Chord drawn | 1 | B1 |
| 4 |  |  | Parallelogram | 1 | B1 complete parallelogram |
| 5 |  |  | AB, AO, AP  BO, BP, OP | 2 | M1 at least 3 correct combinations  A1 fully correct with no extras or permutations |
| 6 | (a) |  | No with explanation | 1 | C1 no with explanation e.g.  numbers in the sequence are even and 603 is not even  or numbers in the sequence are multiples of 6 and 603 is not a multiple of 6  or 6*n* + 12 = 603 with *n* is not an integer |
|  | (b) |  | 42  or multiple of 42 | 1 | B1 42 or multiple of 42 |
| 7 |  |  | Shape A | 2 | P1 finds total perimeter, 14 or 12, or missing edges 4, or 6, for one shape.  A1 shape A with 14 and 12 or 4 and 6 |
| 8 |  |  | 4.25 | 3 | M1 uses scale 8.5 × 50000 (= 425000)  M1 starts conversion to km  “425000” ÷ 100 or “425000” ÷ 1000 or “425000” ÷ 100000  A1 cao |
| 9 |  |  | Explanation | 2 | M1 for using angles on a straight line add up to 180°  or 146 +32 (= 178)  C1 explanation with 178 ≠ 180 and reason angles on a straight line add up to 180 |
| 10 |  |  | 65.25 | 3 | M1 method for number of packs needed 120 ÷ 8 (= 15)  M1 method for total cost “15” × 4.35  A1 cao |
| 11 | (a) |  | Explanation | 1 | C1 34 is not a multiple of 3 oe |
| (b) |  | Explanation | 2 | C1 explains order of operations not correct oe  C1 explains inverse of ×2 not used oe |
| 12 |  |  | 2.18 | 3 | M1 1.643… or 8.143…  M1 (= 2.1773…..)  B1 2.18 or ft |
| 13 |  |  | £0.86 or 86p | 3 | P1 adds any 3 items or choses the highest priced drink and 2 snacks (1.50, 1.75, 1.60) or subtracts 3.99 from the cost of at least 2 items  P1 complete process to find the difference  A1 £0.86 or 86p |
| 14 |  |  | 35.5 | 3 | M1 (= 37.5) or  M1 100 – 27 – “37.5” or 1 −  A1 cao |
| 15 | (a) |  | 135.80 | 4 | P1 starts process to find the number of stones  6 ÷ 1.5  or 1.5 ÷ 5 and 1.5 ÷ 3  or attempts to draw repeat of the pattern  P1 completes process to find total number of stones  or to find the cost of 1.5m of the path  (5 + 5) × 4 (= 40) and 3 × 4 (= 12)  or 2 × 6 ÷ 0.3 (= 40) and 6 ÷ 0.5 (= 12)  P1 process to find total cost  “40” × 2.3 + “12” × 3.65 (= 135.8)  A1 135.8(0) |
|  | (b) |  | No  87.6 > 67.9  with evidence | 2 | M1 method to find costs of narrow path to compare  6 × 4 × 2 × 3.65 (= 175.2)  or 6 × 4 × 3.65 (= 87.6) and “135.8” ÷ 2 (= 67.9)  C1 correct conclusion with 175.2 (accept correct comparison with ft from part (a))  or correct conclusion with 67.9 and 87.6 (accept correct comparison with ft part (a) ÷ 2) |
| 16 |  |  | No with reason | 3 | P1 process to find September profit 780 – 565 (= 215)  P1 completes process to find extra October profit  C1 no with reason comparing 27.95 with 30 |
| 17 |  |  | 20 | 1 | B1 cao |
| 18 |  |  | Integer > 21 | 2 | B1 integer > 21  C1 explanation  e.g. “answer” > 21, “answer” ÷ 21 > 1  “answer” ÷ 6 > 3.5  conversion to decimals with explanation |
| 19 |  |  | 459 | 3 | M1  (= 216) oe or 100 − 32(= 68)  M1 675 – “216” or 0.68 × 675  A1 cao |
| 20 |  |  |  | 3 | P1 for process to start solving the problem,  e.g. 25, 75, 75 or 25 + 75 + 75 (= 175) or  or ratio e.g. 3 : 3 : 1  P1 for complete process 25 ÷ 175 or  A1  oe |
| 21 |  |  | 210 | 4 | P1 process for total girls in Year 7 × 240 (= 118)  P1 process for total students in Year 8 240 + 8 − 32 (= 216)  or number of girls in Year 8 (126)  P1 complete method for angle for Year 8 girls × 360  A1 cao |
| 22 | (a) |  | −2 3 | 2 | M1 correct length line or one correct end and line  A1 cao |
|  | (b) |  | *n* > 4.8 | 2 | M1 for subtracting 3 from both sides or dividing all terms by 5 as a first step (*n* = 4.8)  A1 cao |
| 23 | (a) |  | Correct diagram | 3 | B1 13 and 20 in correct positions  M1 43 − 20 (= 23) or 60 − 43 − 13 (= 4)  A1 correct diagram |
|  | (b) |  |  | 1 | B1  oe or ft Venn diagram for |
| 24 |  |  | Rotation  90°  anti-clockwise  centre (0, -1) | 2 | M1 for 2 of:  Rotation,  90° anti-clockwise (or 270° clockwise)  (centre) (0, -1)  A1 correct transformation  No marks to be awarded if more than one transformation is given. |
| 25 | (a) |  | Reason | 1 | C1 reason for low attendance in hot weather,  e.g. rain, school day, measurement error |
|  | (b) |  | Positive | 1 | B1 positive (correlation) |
|  | (c) |  | 15-25 | 1 | B1 answer in range 15-25 |
|  | (d) |  | Data out of range | 1 | C1 explanation, e.g. extrapolation, data out of range, number of children will be negative |
| 26 |  |  | 13 m2 | 5 | P1 process to find *FE* (28 – 6 – 6) ÷ 2 (= 8)  or *AB* (28 – 6 – 6 – 3 – 3) ÷ 2 (= 5)  P1 process to find area of a triangle  (= 16) or  (= 9) or  (= 10) or  (= 3)  P1 complete process for shaded area  e.g. 8 × 4 + 2 × 3 – (“16” + “9”)  or +  A1 cao  C1 (indep) for m2 |
| 27 |  |  | *x* = 3, *y* = −2 | 3 | M1 correct process to eliminate one variable (condone one arithmetic error)  M1 (dep) for substituting found value in one of the equations or appropriate method after starting again.  A1 cao |
| 28 | (a) | |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | *x* | 0.5 | 1 | 2 | 3 | 4 | 5 | 6 | | *y* | **6** | 3 | 1.5 | **1** | 0.75 | **0.6** | **0.5** | | Correct table | 2 | M1 2 or 3 entries correct  A1 all 4 table entries correct |
|  | (b) |  | Graph | 2 | M1 (dep on M1) for 6 or 7 points plotted from table  A1 correct graph drawn |
| 29 |  |  | 371.42 | 2 | M1 350 × 1.023 oe  A1 371.42 |