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# INTERNATIONAL GCSE
# **MATHEMATICS CORE**
# **9260/1C**

Paper 1C

Mark scheme

November 2020

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**Key to mark types and abbreviations**

| | |
|---|---|
| **M** | Method marks are awarded for a correct method which could lead to a correct answer. |
| **A** | Accuracy marks are awarded when following on from a correct method. It is not necessary to always see the method. This can be implied. |
| **B** | Marks awarded independent of method. |
| **ft** | Follow through marks. Marks awarded for correct working following a mistake in an earlier step. |
| **SC** | Special case. Marks awarded for a common misinterpretation which has some mathematical worth. |
| **M dep** | A method mark dependent on a previous method mark being awarded. |
| **B dep** | A mark that can only be awarded if a previous independent mark has been awarded. |
| **oe** | Or equivalent. Accept answers that are equivalent.<br>eg accept 0.5 as well as $\frac{1}{2}$ |
| **[a, b]** | Accept values between a and b inclusive. |
| **[a, b)** | Accept values a $\leqslant$ value $<$ b |
| **3.14 …** | Accept answers which begin 3.14 eg 3.14, 3.142, 3.1416 |
| **Use of brackets** | It is not necessary to see the bracketed work to award the marks. |

| Q | Answer | Mark | Comments |
|---|---|---|---|
| 1 | $\frac{7}{10\,000}$ | B1 | |
| | **Additional Guidance** | | |
| | | | |

| Q | Answer | Mark | Comments |
|---|---|---|---|
| 2 | 2 | B1 | |
| | **Additional Guidance** | | |
| | | | |

| Q | Answer | Mark | Comments |
|---|---|---|---|
| 3 | $\frac{1}{5} < 30\%$ | B1 | |
| | **Additional Guidance** | | |
| | | | |

| Q | Answer | Mark | Comments |
|---|---|---|---|
| 4 | square | B1 | |
| | **Additional Guidance** | | |
| | | | |

| Q | Answer | Mark | Comments |
|---|---|---|---|
| 5 | 200 | B2 | B1 24 32 40 48 56<br>with at most one omission or one extra |
| | **Additional Guidance** | | |
| | | | |

| Q | Answer | Mark | Comments |
|---|---|---|---|
| 6 | **Alternative method 1** | | |
| | 20 ÷ 5 or 4 | M1 | oe<br>may be implied by 48 or 3.25 |
| | 12 × (their 4 – 0.75)<br>or<br>12 × 3.25 | M1dep | oe eg 12 × their 4 – 12 × 0.75<br>or 48 – 9 |
| | 39 | A1 | |
| | **Alternative method 2** | | |
| | 20 – 5 × 0.75<br>or 20 – 3.75 or 16.25 | M1 | oe |
| | their 16.25 ÷ 5 × 12 | M1dep | oe eg 3.25 ×12 |
| | 39 | A1 | |
| | **Additional Guidance** | | |
| | | | |

| Q | Answer | Mark | Comments |
|---|---|---|---|
| 7 | 48 ÷ 6 or 8<br>or half-circle = 4<br>or quarter-circle = 2 | M1 | may be seen on pictogram<br>implied by 28 (basketball) or 10 (tennis) or 12 (swimming) |
| | 3.5 and 1.25<br>or 2.25<br>or 28 (basketball)<br>or 10 (tennis)<br>or 6 + 8 + 4 | M1 | oe<br>3.5 and 1.25 may be implied by correct ft basketball and tennis using their 8 |
| | 18 | A1 | |
| | **Additional Guidance** | | |
| | Circle = 4, basketball = 14 and tennis = 5 | | M0M1A0 |
| | Circle = 6, basketball = 21 and tennis = 7.5 | | M0M1A0 |
| | Circle = 6, basketball = 21 and tennis = 7 | | M0M0A0 |

| Q | Answer | Mark | Comments |
|---|---|---|---|
| 8 | D | B1 | |
| | A | B1 | |
| | B | B1 | |
| | **Additional Guidance** | | |
| | | | |

| Q | Answer | Mark | Comments |
|---|---|---|---|
| 9(a) | $\times 4$ and $-5$<br>or<br>$-1.25$ and $\times 4$ | B1 | oe<br>in the correct boxes |
| | **Additional Guidance** | | |
| | Allow $+-5$ for $-5$ | | |

| Q | Answer | Mark | Comments |
|---|---|---|---|
| 9(b) | $(16 \times 2) - 3$ or $32 - 3$ | M1 | |
| | 29 | A1 | SC1 35 or 5 or 26 |
| | **Additional Guidance** | | |
| | | | |

| Q | Answer | Mark | Comments |
|---|---|---|---|
| 10(a) | (Row) E | B1 | implied by 23 24 25 26 27 |
| | **Additional Guidance** | | |
| | 25 and 27 | | B0 |

| Q | Answer | Mark | Comments |
|---|---|---|---|
| 10(b) | (Row) B | B1 | implied by 14 15 |
| | **Additional Guidance** | | |
| | 25 and 27 in (a)<br>14 in (b) | | B0 in (a)<br>B1 in (b) |

| Q | Answer | Mark | Comments |
|---|---|---|---|
| 10(c) | (Row) C and (row) F | B1 | either order<br>implied by 16 17 18 and 28 29 30 31 32 33 |
| | **Additional Guidance** | | |
| | 25 and 27 in (a) or 14 in (b)<br>16 and 32 in (c) | | B1 in (c) |

| Q | Answer | Mark | Comments |
|---|---|---|---|
| 11(a) | <table><tr><td>7</td><td>8</td><td>9</td></tr><tr><td>8</td><td>9</td><td>10</td></tr><tr><td>9</td><td>10</td><td>11</td></tr></table> | B2 | B1 four correct |
| | **Additional Guidance** | | |
| | | | |

| Q | Answer | Mark | Comments |
|---|---|---|---|
| 11(b) | $\frac{2}{9}$ | B1ft | oe fraction, decimal or percentage<br>ft their fully completed table |
| | **Additional Guidance** | | |
| | Accept zero or $\frac{0}{9}$ if ft gives no primes | B1ft | |
| | Ignore incorrect cancelling or conversion to decimal or percentage after correct answer seen | B1ft | |
| | $\frac{2}{9}$ followed by an answer as a ratio | B0 | |

| Q | Answer | Mark | Comments |
|---|---|---|---|
| 12(a) | $42 \times 5$ or 210 | M1 | oe |
| | 235 | A1 | |
| | **Additional Guidance** | | |
| | | | |

| Q | Answer | Mark | Comments |
|---|---|---|---|
| 12(b) | **Alternative method 1** | | |
| | $42x + 25 = 319$<br>or<br>$\frac{319-25}{42}$ or $\frac{294}{42}$ or 7 | M1 | oe<br>may be implied by 4 |
| | 13:30 + their 7 – 3 | M1dep | oe |
| | 17:30 | A1 | oe eg 5.30 (pm)<br>SC2 [16:54, 16:54.3]<br>SC1 [3.4, 3.405] or $\frac{143}{42}$ oe |
| | **Alternative method 2** | | |
| | $42(y + 3) + 25 = 319$<br>or<br>$319 - 42 \times 3$ or 193 | M1 | oe<br>may be implied by $\frac{168}{42}$ oe or 4 |
| | 13:30 + $\frac{\text{their } 193-25}{42}$<br>or 13:30 + $\frac{168}{42}$ or 13:30 + 4 | M1dep | oe |
| | 17:30 | A1 | oe eg 5.30 (pm)<br>SC2 [16:54, 16:54.3]<br>SC1 [3.4, 3.405] or $\frac{143}{42}$ oe |
| | **Additional Guidance** | | |
| | Allow eg 17.30 or 1730 for 17:30 | | |

| Q | Answer | Mark | Comments |
|---|---|---|---|
| 13(a) | 8 | B1 | |
| | **Additional Guidance** | | |
| | | | |

| Q | Answer | Mark | Comments |
|---|---|---|---|
| 13(b) | 305.7(6) | B1 | |
| | 305.8 | B1ft | ft any number to at least 2 decimal places correctly rounded to 1 decimal place |
| | **Additional Guidance** | | |
| | Answer only 305.8 | | B1B1 |

| Q | Answer | Mark | Comments |
|---|---|---|---|
| 14(a) | Correct line from (–4, 2) to (4, 2) | B1 | |
| | **Additional Guidance** | | |
| | Line too short | | B0 |
| | Correct line too long | | B1 |
| | Ignore any working for part (b) eg the line $x = -1$ drawn | | |
| | Ignore the lines $x = -4$ and/or $x = 4$ drawn | | |

| Q | Answer | Mark | Comments |
|---|---|---|---|
| 14(b) | **Alternative method 1** Using the graph | | |
| | (–1, 2) | B2ft | ft their line from (a)<br>B1 line $y = x + 3$ drawn |
| | **Alternative method 2** Using the equations | | |
| | $2 = x + 3$ or $x = -1$ | M1 | oe |
| | (–1, 2) | A1 | |
| | **Additional Guidance** | | |
| | | | |

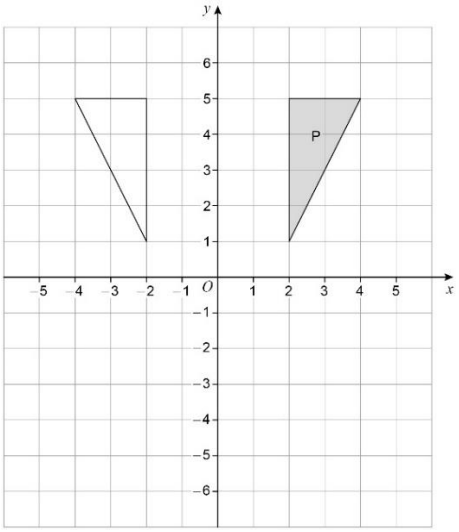
| Q | Answer | Mark | Comments |
|---|---|---|---|
| 15 | $a^2 + 16a - 3$ | B3 | B2 two terms correct<br>B1 one term correct |
| | **Additional Guidance** | | |
| | $a + 16a - 3 = 17a - 3$ | | B2 |
| | $a^2 + 16a + - 3$ | | B2 |
| | $1a^2 + 16a - 3$ | | B2 |
| | B3 answer followed by further incorrect simplification is B2<br>eg $a^2 + 16a - 3 = 17a - 3$ | | B2 |
| | B2 answer followed by further incorrect simplification is B1<br>eg $a^2 + 2a - 3 = 3a - 3$ | | B1 |
| | B1 answer followed by further incorrect simplification is B0<br>eg $a^2 + 2a + 3 = 3a + 3$ | | B0 |
| | $a(a + 16)$ implies two correct terms | | |

| Q | Answer | Mark | Comments |
|---|---|---|---|
| 16 | 8 × 500 or 4000 | M1 | oe<br>may be implied by 3910 |
| | their 4000 ÷ 170<br>or 23(.5…) | M1dep | oe<br>23 may be seen in a multiplication eg 23 × 170<br>may be implied by 3910 |
| | their 4000 – their 23 × 170<br>or<br>(their 4000 ÷ 170 – their 23) × 170 | M1dep | oe eg 4000 – 3910<br>or<br>0.5… × 170<br>their 23 must be a rounded down integer |
| | 90 | A1 | SC2 160<br>SC1 2(.9…) |
| | **Additional Guidance** | | |
| | Further work eg 170 – 90 = 80 and answer 80 | | M3A0 |

| Q | Answer | Mark | Comments |
|---|---|---|---|
| 17(a) | (0 × 15,) 1 × 6, 2 × 4, 3 × 3, 4 × 1, 5 × 1<br>or<br>(0,) 6, 8, 9, 4, 5 seen | M1 | oe<br>may be next to table<br>allow one error |
| | (0 × 15 +) 1 × 6 + 2 × 4 + 3 × 3 + 4 × 1 + 5 × 1 (= 32)<br>or<br>(0 +) 6 + 8 + 9 + 4 + 5 (= 32) | A1 | oe |
| | **Additional Guidance** | | |
| | 6, 8, 9, 4, 5 seen in a column with total 32 at the bottom implies addition | | M1A1 |

| Q | Answer | Mark | Comments |
|---|---|---|---|
| 17(b) | **Alternative method 1** | | |
| | $\frac{32}{15+6+4+3+1+1}$ or $\frac{32}{30}$ | M1 | oe |
| | 1.06… or 1.07 or 1.1 and senior<br>or<br>$\frac{16}{15}$ and $\frac{18}{15}$ and senior<br>or<br>$1\frac{1}{15}$ and $1\frac{3}{15}$ and senior | A1 | oe<br>fractions must have a common denominator<br>eg $\frac{32}{30}$ and $\frac{36}{30}$ |
| | **Alternative method 2** | | |
| | 1.2 × 30 or 36 | M1 | |
| | 36 and senior | A1 | |
| | **Additional Guidance** | | |
| | | | |

| Q | Answer | Mark | Comments |
|---|---|---|---|
| 18 | **Alternative method 1** | | |
| | $80 \times \frac{2}{5}$ or 32 | M1 | oe<br>allow $\frac{32}{80}$ |
| | 80 – their 32 or 48<br>or<br>their 32 + 7 or 39<br>or<br>80 – 7 – their 32 | M1dep | allow $\frac{48}{80}$ or $\frac{39}{80}$<br>may be implied by green + blue = 48 |
| | 41 | A1 | |
| | **Alternative method 2** | | |
| | $1 - \frac{2}{5}$ or $\frac{3}{5}$ | M1 | oe |
| | 80 × their $\frac{3}{5}$ or 48 | M1dep | oe<br>allow $\frac{48}{80}$<br>may be implied by green + blue = 48 |
| | 41 | A1 | |
| | **Additional Guidance** | | |
| | Answer $\frac{41}{80}$ | | M2A0 |
| | 41 seen followed by answer $\frac{41}{80}$ | | M2A0 |
| | Condone (0 blue and) 48 green | | M2A0 |

| Q | Answer | Mark | Comments |
|---|---|---|---|
| 19(a) | Fully correct reflected triangle<br>  <br> | B2 | allow freehand if intention is clear<br>B1 two vertices correct with or without triangle drawn<br>or<br>reflection in $x = a$<br>or<br>reflection in the $x$-axis |
| | **Additional Guidance** | | |
| | Ignore shading | | |

| Q | Answer | Mark | Comments |
|---|---|---|---|
| 19(b) | **Alternative method 1** | | |
| | Rotation | B1 | |
| | 180° or half turn | B1 | ignore clockwise or anticlockwise |
| | (0, 1) | B1 | |
| | **Alternative method 2** | | |
| | Enlargement | B1 | |
| | Scale factor –1 | B1 | |
| | (0, 1) | B1 | |
| | **Additional Guidance** | | |
| | Accept rotate for rotation | | 1st B1 |
| | Do not accept turn or spin | | 1st B0 |
| | Accept 180 for 180° | | 2nd B1 |
| | Accept 0, 1 for (0, 1) | | 3rd B1 |
| | Combined transformation eg Rotate 180 and move 4 to the left | | B0B0B0 |

| Q | Answer | Mark | Comments |
|---|---|---|---|
| 20 | –2, –1, 0, 1, 2 | B1 | |
| | **Additional Guidance** | | |
| | | | |

| Q | Answer | Mark | Comments |
|---|---|---|---|
| 21 | $\frac{1}{2}$ | B1 | |
| | **Additional Guidance** | | |
| | | | |

| Q | Answer | Mark | Comments |
|---|---|---|---|
| 22 | $w^2 - 8w + 16$ | B1 | |
| | **Additional Guidance** | | |
| | | | |

| Q | Answer | Mark | Comments |
|---|---|---|---|
| 23 | **Alternative method 1** | | |
| | ($x$ =) 180 – 124 or 56 | M1 | oe |
| | 2 × their 56 + 16 or 128<br>or<br>their 56 + 2 × their 56 + 16 or 184 | M1dep | oe |
| | No and 56 and 128 (and 124)<br>or<br>No and 56 and 184 (and 180) | A1 | oe<br>No may be implied eg 128 ≠ 124 |
| | **Alternative method 2** | | |
| | $2x$ + 16 = 124 | M1 | oe |
| | (124 – 16) ÷ 2 or 54 | M1dep | oe |
| | No and 54 and 178 | A1 | oe<br>No may be implied eg 54 + 124 ≠ 180 |
| | **Alternative method 3** | | |
| | $x$ + $2x$ + 16 = 180 | M1 | oe |
| | (180 – 16) ÷ 3 or [54.6, 54.7] | M1dep | oe |
| | No and [54.6, 54.7]<br>and [178.6, 178.7] (and 180)<br>or<br>No and [54.6, 54.7]<br>and [125, 125.4] (and 124) | A1 | oe<br>No may be implied eg 54.7 + 124 ≠ 180 |

**Alternative method and Additional Guidance on the next page**

| | | | |
|---|---|---|---|
| **23 cont** | **Alternative method 4** | | |
| | ($x$ = ) 180 – 124 or 56<br>or<br>$2x$ + 16 = 124<br>or<br>$x$ + $2x$ + 16 = 180 | M1 | oe |
| | Any two of<br>180 – 124 or 56<br>and<br>(124 – 16) ÷ 2 or 54<br>and<br>(180 – 16) ÷ 3 or [54.6, 54.7] | M1dep | oe |
| | No and any two of<br>56 and 54 and [54.6, 54.7] | A1 | oe<br>No may be implied eg 56 ≠ 54 |
| | **Additional Guidance** | | |
| | Using 120 for 124 is from measuring and is not a misread | | |
| | In Alt 1 and Alt 2 allow use of their $x$ to work out angle $PQD$ using 180 – angle $CQP$ and then compare with their $x$<br>eg Alt 1, $x$ = 56 and 180 – 16 – 2 × 56 or 52 and No<br>eg Alt 2, $x$ = 54 and 180 – 16 – 2 × 54 or 56 and No | | M2A1<br>M2A1 |

| Q | Answer | Mark | Comments |
|---|---|---|---|
| 24(a) | $(x-2)(x-3)$<br>or<br>$(3-x)(2-x)$ | B2 | B1 $(x+a)(x+b)$<br>where $ab = 6$ or $a+b=-5$<br>or $x(x-3)-2(x-3)$<br>or $x(x-2)-3(x-2)$ |
| | **Additional Guidance** | | |
| | $(x-3)(x-2)$ | | B2 |
| | Condone missing final bracket for B2 or B1<br>eg $(x-2)(x-3$ | | B2 |
| | Condone multiplication signs for B2 or B1<br>eg1 $(x-2)\times(x-3)$<br>eg2 $(x-1)\times(x-6)$ | | B2<br>B1 |
| | $(x+2)(x+3)$ | | B1 |
| | Ignore any attempt to solve | | |

| Q | Answer | Mark | Comments |
|---|---|---|---|
| 24(b) | $a^2b^3(ab^2+2)$ | B2 | oe eg $b^3a^2(ab^2+2)$<br>B1 partial factorisation with a factor of at least degree two extracted<br>eg $a^2(ab^5+2b^3)$<br>or $b^3(a^3b^2+2a^2)$ or $b^2(a^3b^3+2a^2b)$<br>or $ab(a^2b^4+2ab^2)$ |
| | **Additional Guidance** | | |
| | Condone $(ab^2+2)a^2b^3$ | | B2 |
| | Condone missing final bracket for B2 or B1<br>eg $a^2b^3(ab^2+2$ | | B2 |
| | Condone multiplication signs for B2 or B1<br>eg1 $a^2\times b^3\times(ab^2+2)$<br>eg2 $b^3\times(a^3\times b^2+2\times a^2)$ | | B2<br>B1 |

| Q | Answer | Mark | Comments |
|---|---|---|---|
| 25(a) | $\frac{28}{79}$ | B1 | oe fraction, decimal or percentage<br>allow 0.35 or 35% if correct division seen |
| | **Additional Guidance** | | |
| | 35.4(…)% | | B1 |
| | 0.354(…) | | B1 |
| | Answer given as a ratio | | B0 |
| | Ignore incorrect cancelling or conversion to decimal or percentage after correct answer seen | | |

| Q | Answer | Mark | Comments |
|---|---|---|---|
| 25(b) | $79 - 15 - 28 - 32$ or 4<br>or<br>$1 - \frac{15 + 28 + 32}{79}$ | M1 | oe<br>4 may be on diagram |
| | $\frac{4}{79}$ | A1 | oe fraction, decimal or percentage<br>allow 0.05 or 5% if correct method seen |
| | **Additional Guidance** | | |
| | $\frac{4}{75}$ | | M1A0 |
| | 4 seen on diagram even if not subsequently used | | M1 |
| | 5.06(…)% or 5.1% | | M1A1 |
| | 0.0506(…) or 0.051 | | M1A1 |
| | Answer given as a ratio | | A0 |
| | Ignore incorrect cancelling or conversion to decimal or percentage after correct answer seen | | |

| Q | Answer | Mark | Comments | |
|---|---|---|---|---|
| 26 | **Alternative method 1** | | | |
| | 3000 × 1.04 or 3120 | M1 | oe eg 3000 + 3000 × 0.04 | |
| | their 3120 × 0.8 | M1 | oe<br>3120 must not be 3000 or 120 | |
| | 2496 | A1 | SC1 2520 or 3456 | |
| | **Alternative method 2** | | | |
| | 3000 × 0.8 or 2400 | M1 | oe eg 3000 – 3000 × 0.2 | |
| | their 2400 × 1.04 | M1 | oe<br>their 2400 must not be 3000 or 600 | |
| | 2496 | A1 | SC1 2520 or 3456 | |
| | **Alternative method 3** | | | |
| | 1.04 × 0.8 or 0.832 | M1 | oe | |
| | their 0.832 × 3000 | M1dep | oe | |
| | 2496 | A1 | SC1 2520 or 3456 | |
| | **Additional Guidance** | | | |
| | 3000 × 1.04 – 3000 × 0.2 = 2520 | | | SC1 |
| | 3000 × 0.96 × 1.2 = 3456 | | | SC1 |

| Q | Answer | Mark | Comments |
|---|---|---|---|
| 27 | **Alternative method 1** | | |
| | $x - 5$<br>or<br>$8 \times x$ or $8x$ | M1 | oe<br>may be implied by $4x - 20$ |
| | $4x + 4(x - 5)$ (= 90)<br>or<br>$8x - 20$ (= 90) | M1dep | oe eg $4x - 10 = 45$ |
| | $4x + 4x = 90 + 20$<br>or<br>$8x = 110$<br>or<br>$(90 + 20) \div 8$ | M1dep | oe eg $4x = 55$ |
| | 13.75 | A1 | oe fraction or mixed number |
| | **Alternative method 2** | | |
| | $90 + 4 \times 5$ or 110 | M1 | oe |
| | $(90 + 4 \times 5) \div 2$<br>or $110 \div 2$ or 55 | M1dep | oe<br>$90 \div 2 + 5 + 5$ implies M2 |
| | $(90 + 4 \times 5) \div 2 \div 4$<br>or $55 \div 4$ | M1dep | oe eg $(90 \div 2 + 5 + 5) \div 4$ |
| | 13.75 | A1 | oe fraction or mixed number |
| | **Alternative method 3** | | |
| | $(x =) y + 5$<br>or<br>$8 \times y$ or $8y$ | M1 | oe where $y$ is the length of a shorter side<br>any letter except $x$<br>may be implied by $4y + 20$ |
| | $4y + 4(y + 5)$ (= 90)<br>or<br>$8y + 20$ (= 90) | M1dep | oe eg $4y + 10 = 45$ |
| | $8(x - 5) = 90 - 20$<br>or<br>$(90 - 20) \div 8 + 5$ or $8.75 + 5$ | M1dep | oe eg $4(x - 5) = 35$ |
| | 13.75 | A1 | oe fraction or mixed number |

**Additional Guidance on the next page**

| | | |
|---|---|---|
| **27 cont** | **Additional Guidance** | |
| | $13.75 \times 4 + 8.75 \times 4 = 90$ Answer 13.75 | M1M1M1A1 |
| | $13.75 \times 4 + 8.75 \times 4 = 90$ 13.75 not on answer line | M1M1M1A0 |
| | 8.75 from incorrectly solving $8x - 20 = 90$ | M2M0A0 |
| | Using trial and improvement is 4 marks (if answer correct) or 0 marks | |

| Q | Answer | Mark | Comments |
|---|---|---|---|
| **28** | Ratios equivalent to 3 : 2 and 5 : 4 with matching whole numbers of adults eg 30 : 20 and 30 : 24<br>or 15 : 10<br>or 15 : 12<br>or 15 + 10<br>or 15 + 12<br>or $15 \times \frac{3+2}{3}$ or $5 \times 5$ or 25<br>or $15 \times \frac{5+4}{5}$ or $3 \times 9$ or 27 | M1 | oe eg $3 \times 5 : 2 \times 5$<br>may be implied |
| | 15 : 10 and 15 : 12<br>or<br>15 + 10 and 15 + 12<br>or<br>$15 \times \frac{3+2}{3}$ or $5 \times 5$ or 25<br>and $15 \times \frac{5+4}{5}$ or $3 \times 9$ or 27 | M1dep | oe<br>may be implied |
| | 52 | A1 | |
| | **Additional Guidance** | | |
| | | | |

| Q | Answer | Mark | Comments |
|---|---|---|---|
| 29 | $3.4^2$ and $2.3^2$<br>or<br>11.56 and 5.29<br>or<br>16.85 | M1 | oe |
| | $\sqrt{3.4^2 + 2.3^2}$<br>or<br>$\sqrt{16.85}$ | M1dep | oe |
| | [4.1, 4.105] or $\frac{\sqrt{1685}}{10}$ | A1 | |
| | **Additional Guidance** | | |
| | Answer only in the range [4.1, 4.105] | | M1M1A1 |
| | Answer in the range [4.1, 4.105] from drawing | | M0M0A0 |
| | Answer in the range [4.1, 4.105] from trigonometry | | M0M0A0 |