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# GCSE MATHEMATICS 8300/1F

Foundation Tier Paper 1 Non-Calculator

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Mark scheme

June 2025

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Version: 1.0 Final



Mark schemes are prepared by the Lead Assessment Writer and considered, together with the relevant questions, by a panel of subject teachers. This mark scheme includes any amendments made at the standardisation events which all associates participate in and is the scheme which was used by them in this examination. The standardisation process ensures that the mark scheme covers the students' responses to questions and that every associate understands and applies it in the same correct way. As preparation for standardisation each associate analyses a number of students' scripts. Alternative answers not already covered by the mark scheme are discussed and legislated for. If, after the standardisation process, associates encounter unusual answers which have not been raised they are required to refer these to the Lead Examiner.

It must be stressed that a mark scheme is a working document, in many cases further developed and expanded on the basis of students' reactions to a particular paper. Assumptions about future mark schemes on the basis of one year's document should be avoided; whilst the guiding principles of assessment remain constant, details will change, depending on the content of a particular examination paper.

No student should be disadvantaged on the basis of their gender identity and/or how they refer to the gender identity of others in their exam responses.

A consistent use of 'they/them' as a singular and pronouns beyond 'she/her' or 'he/him' will be credited in exam responses in line with existing mark scheme criteria.

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**Glossary for Mark Schemes**

GCSE examinations are marked in such a way as to award positive achievement wherever possible. Thus, for GCSE Mathematics papers, marks are awarded under various categories.

If a student uses a method which is not explicitly covered by the mark scheme the same principles of marking should be applied. Credit should be given to any valid methods. Examiners should seek advice from their senior examiner if in any doubt.

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

Examiners should consistently apply the following principles.

**Diagrams**

Diagrams that have working on them should be treated like normal responses. If a diagram has been written on but the correct response is within the answer space, the work within the answer space should be marked. Working on diagrams that contradicts work within the answer space is not to be considered as choice but as working, and is not, therefore, penalised.

**Responses which appear to come from incorrect methods**

Whenever there is doubt as to whether a student has used an incorrect method to obtain an answer, as a general principle, the benefit of doubt must be given to the student. In cases where there is no doubt that the answer has come from incorrect working then the student should be penalised.

**Questions which ask students to show working**

Instructions on marking will be given but usually marks are not awarded to students who show no working.

**Questions which do not ask students to show working**

As a general principle, a correct response is awarded full marks.

**Misread or miscopy**

Students often copy values from a question incorrectly. If the examiner thinks that the student has made a genuine misread, then only the accuracy marks (A or B marks), up to a maximum of 2 marks are penalised. The method marks can still be awarded.

**Further work**

Once the correct answer has been seen, further working may be ignored unless it goes on to contradict the correct answer.

**Choice**

When a choice of answers and/or methods is given, mark each attempt. If both methods are valid then M marks can be awarded but any incorrect answer or method would result in marks being lost.

**Work not replaced**

Erased or crossed out work that is still legible should be marked.

**Work replaced**

Erased or crossed out work that has been replaced is not awarded marks.

**Premature approximation**

Rounding off too early can lead to inaccuracy in the final answer. This should be penalised by 1 mark unless instructed otherwise.

**Continental notation**

Accept a comma used instead of a decimal point (for example, in measurements or currency), provided that it is clear to the examiner that the student intended it to be a decimal point.

| Q    | Answer | Mark | Comments |
|------|--------|------|----------|
| 1(a) | 13     | B1   |          |

| Q    | Answer | Mark | Comments |
|------|--------|------|----------|
| 1(b) | 32     | B1   |          |

| Q    | Answer | Mark | Comments |
|------|--------|------|----------|
| 1(c) | −4     | B1   |          |

| Q    | Answer | Mark | Comments |
|------|--------|------|----------|
| 1(d) | −18    | B1   |          |

| Q    | Answer | Mark | Comments |
|------|--------|------|----------|
| 2(a) | 15     | B1   |          |

| Q    | Answer | Mark | Comments |
|------|--------|------|----------|
| 2(b) | 8      | B1   |          |

| Q    | Answer | Mark | Comments |
|------|--------|------|----------|
| 2(c) | 13     | B1   |          |

| Q    | Answer | Mark | Comments |
|------|--------|------|----------|
| 2(d) | 36     | B1   |          |

| Q | Answer                                                                                | Mark  | Comments                     |
|---|---------------------------------------------------------------------------------------|-------|------------------------------|
| 3 | $48 \div 8$ or 6<br>or<br>$48 \div 2$ or 24                                           | M1    | oe<br>implied by 72 for Road |
|   | their 6 + their 24<br>or<br>their $6 \times 5$<br>or<br>their $24 \times \frac{5}{4}$ | M1dep | oe                           |
|   | 30                                                                                    | A1    | SC2 20<br>SC1 60             |
|   | <b>Additional Guidance</b>                                                            |       |                              |
|   | SC2 is for using Road<br>SC1 is for using Lane                                        |       |                              |
|   | Check diagram for working                                                             |       |                              |

| Q    | Answer     | Mark | Comments |
|------|------------|------|----------|
| 4(a) | [3.9, 4.1] | B1   |          |

| Q    | Answer                                                     | Mark | Comments                               |
|------|------------------------------------------------------------|------|----------------------------------------|
| 4(b) | <b>Alternative method 1: reads off at '10' from graph</b>  |      |                                        |
|      | [17.9, 18.1]                                               | B2   | B1 [7.9, 8.1]<br>or their reading + 10 |
|      | <b>Alternative method 2: uses their answer to part (a)</b> |      |                                        |
|      | 2 × their (a)<br>or<br>(their (a) + 5) × 2                 | M1   | oe                                     |
|      | [17.9, 18.1]                                               | A1ft | ft 2 × their (a) + 10                  |

| Q | Answer                                | Mark | Comments                                               |
|---|---------------------------------------|------|--------------------------------------------------------|
| 5 | $8 \times 43$                         | M1   | oe                                                     |
|   | 344                                   | A1   |                                                        |
|   | 349                                   | A1ft | ft their $344 + 5$ correctly evaluated with M1 awarded |
|   | <b>Additional Guidance</b>            |      |                                                        |
|   | Trial and improvement is 0 or 3 marks |      |                                                        |
|   | $8 \times 43.5 = 348$                 |      | M0A0A0                                                 |
|   |                                       |      |                                                        |

| Q | Answer                                                                                                                | Mark | Comments                                                                                          |
|---|-----------------------------------------------------------------------------------------------------------------------|------|---------------------------------------------------------------------------------------------------|
| 6 | $200 \times 4 \div 5$ or 160<br>or<br>805 and 800                                                                     | M2   | oe eg $200 \div \frac{5}{4}$<br>M1 correct first step using one operator<br>eg $5 \div 4$ or 1.25 |
|   | 161                                                                                                                   | A1   |                                                                                                   |
|   | <b>Additional Guidance</b>                                                                                            |      |                                                                                                   |
|   | M1 may be awarded for correct work with no answer or incorrect answer, even if this is seen amongst multiple attempts |      |                                                                                                   |
|   | Build up methods must be fully correct                                                                                |      |                                                                                                   |

| Q    | Answer                                                                                                                                                                                               | Mark  | Comments                                 |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|------------------------------------------|
| 7(a) | $25 \div 2$ or 12.5                                                                                                                                                                                  | M1    | oe<br>implied by 37.5                    |
|      | $(25 \div 2 + 25) \div 8$<br>or 4(.6) or better<br>or<br>$(25 \div 2 + 25)$ evaluated and sight of the nearest multiple of 8 under/over their evaluation<br>or<br>2.5                                | M1dep | oe<br><br>multiple may be seen in a list |
|      | 5 with M2 awarded and no errors                                                                                                                                                                      | A1    | SC1 50 and 7                             |
|      | <b>Additional Guidance</b>                                                                                                                                                                           |       |                                          |
|      | SC1 is for two full-priced records                                                                                                                                                                   |       |                                          |
|      | 37.5 or 2.5 may be implied, eg<br>4 Saturdays is 32, need 5.5 more    answer 5    (37.5 implied)                                                                                                     |       | M1M1A1                                   |
|      | $37.5 \div 8 = 4.6875$ answer = 5<br>$37.5 \div 8 = 4.6$ answer = 5    (truncated)<br>$37.5 \div 8 = 4.2$ answer = 5    (error in division)<br>$37.5 \div 8 = 5.2$ answer = 5    (error in division) |       | M1M1A1<br>M1M1A1<br>M1M1A0<br>M1M1A0     |

| Q    | Answer                                    | Mark | Comments |
|------|-------------------------------------------|------|----------|
| 7(b) | It is greater than the answer to part (a) | B1   |          |

| Q | Answer                                                             | Mark  | Comments                                                                            |
|---|--------------------------------------------------------------------|-------|-------------------------------------------------------------------------------------|
| 8 | <b>Alternative method 1: uses only multiplication and division</b> |       |                                                                                     |
|   | 170 ÷ 4 × 10<br>or<br>170 ÷ 2 × 5                                  | M2    | oe eg 170 × 2.5<br>M1 correct first step using one operator<br>eg 170 × 10 or 5 ÷ 2 |
|   | 425                                                                | A1    | SC2 125 or 1500                                                                     |
|   | <b>Alternative method 2: uses addition or subtraction</b>          |       |                                                                                     |
|   | 170 ÷ 2 or 85                                                      | M1    | oe                                                                                  |
|   | 170 × 3 – their 85<br>or<br>170 × 2 + their 85                     | M1dep | oe                                                                                  |
|   | 425                                                                | A1    | SC2 125 or 1500                                                                     |
|   | <b>Additional Guidance</b>                                         |       |                                                                                     |
|   | SC2 is from working with onions or water                           |       |                                                                                     |

| Q    | Answer                                                                                                                                                  | Mark | Comments                                                                                         |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------|------|--------------------------------------------------------------------------------------------------|
| 9(a) | $2 + 2 + 3 + 4 + 9$ or 20<br>or<br>$1 + 1 + 1 + 2 + 3 + 4 + 4 + 9$ or 25                                                                                | M1   | oe                                                                                               |
|      | 20 : 25                                                                                                                                                 | A1   | oe                                                                                               |
|      | 4 : 5 or 0.8 : 1 or 1 : 1.25                                                                                                                            | A1ft | ft their ratio written in its simplest form with M1 awarded if it can be simplified<br>SC2 5 : 4 |
|      | <b>Additional Guidance</b>                                                                                                                              |      |                                                                                                  |
|      | SC2 is for correct ratio reversed                                                                                                                       |      |                                                                                                  |
|      | Condone any ratio simplified to unitary form, with M1 awarded, for A1ft<br>eg1 20 : 19 answer $1 : \frac{19}{20}$ or $\frac{20}{19} : 1$<br>eg2 20 : 19 |      | M1A0A1ft<br>M1A0A0ft                                                                             |
|      | 20 : 15 simplified to 4 : 3                                                                                                                             |      | M1A0A1ft                                                                                         |

| Q    | Answer                                                                      | Mark | Comments                           |
|------|-----------------------------------------------------------------------------|------|------------------------------------|
| 9(b) | $\frac{1}{5}$                                                               | B1   | oe fraction, decimal or percentage |
|      | <b>Additional Guidance</b>                                                  |      |                                    |
|      | Ignore simplification or conversion attempts after correct probability seen |      |                                    |
|      | Ignore use of probability words                                             |      |                                    |
|      | 1 : 5 or 1 in 5 (chance)                                                    |      | B0                                 |

| Q  | Answer                                                                                              | Mark  | Comments            |
|----|-----------------------------------------------------------------------------------------------------|-------|---------------------|
| 10 | <b>Alternative method 1: substitutes first</b>                                                      |       |                     |
|    | $4^2$ or 16 or 32<br>or<br>$3 \times 4$ or 12 or 24                                                 | M1    | oe<br>implied by 28 |
|    | $2 \times (4 \times 4 + 3 \times 4)$                                                                | M1dep | oe                  |
|    | 56                                                                                                  | A1    |                     |
|    | <b>Alternative method 2: multiplies out first</b>                                                   |       |                     |
|    | $2 \times a^2$ or $2 \times 3a$                                                                     | M1    | oe                  |
|    | $2 \times 4 \times 4 + 2 \times 3 \times 4$                                                         | M1dep | oe                  |
|    | 56                                                                                                  | A1    |                     |
|    | <b>Alternative method 3: factorises first</b>                                                       |       |                     |
|    | $2a(a + 3)$ or $2 \times a$ or $a + 3$                                                              | M1    | oe                  |
|    | $2 \times 4 \times (4 + 3)$                                                                         | M1dep | oe                  |
|    | 56                                                                                                  | A1    |                     |
|    | <b>Additional Guidance</b>                                                                          |       |                     |
|    | Inclusion of $a$ can score a maximum of one mark<br>eg1 $4^2 = 16$ $16 \times 2 = 32a$<br>eg2 $56a$ |       | M1 only<br>M1 only  |
|    | $2 \times 4^2 + 2 \times 3a$ is not enough for the second mark of Alt 2                             |       | M1M0A0              |

| Q  | Answer               | Mark | Comments                                                                       |
|----|----------------------|------|--------------------------------------------------------------------------------|
| 11 | Correct circle drawn | B1   | mark intention, but must have been an attempt with compasses and not free-hand |

| Q     | Answer                  | Mark | Comments                                                                        |
|-------|-------------------------|------|---------------------------------------------------------------------------------|
| 12(a) | $240 \div 8 \times 350$ | M2   | oe<br>M1 correct first step using one operator<br>eg $240 \times 350$ or 84 000 |
|       | 10 500                  | A1   |                                                                                 |

| Q     | Answer                                                                                                                         | Mark  | Comments                       |
|-------|--------------------------------------------------------------------------------------------------------------------------------|-------|--------------------------------|
| 12(b) | $2600 \div (3 + 2 + 5)$ or 260                                                                                                 | M1    | oe                             |
|       | their $260 \times 5$                                                                                                           | M1dep | oe<br>$2600 \div 2$ implies M2 |
|       | 1300                                                                                                                           | A1    | SC2 780 or 520 or 6500         |
|       | <b>Additional Guidance</b>                                                                                                     |       |                                |
|       | SC2 is for working out the number of teas / hot chocolates or for the misconception that 2600 was the number of hot chocolates |       |                                |
|       | Answer 780 : 1300 : 520                                                                                                        |       | M1M1A0                         |

| Q  | Answer                                              | Mark  | Comments          |
|----|-----------------------------------------------------|-------|-------------------|
| 13 | $180 - 74$ or 106<br>or<br>$2x + 74 = 180$          | M1    | oe<br>oe equation |
|    | their $106 \div 2$<br>or<br>$x = (180 - 74) \div 2$ | M1dep | oe                |
|    | 53                                                  | A1    |                   |

| Q     | Answer                                                              | Mark | Comments                                              |
|-------|---------------------------------------------------------------------|------|-------------------------------------------------------|
| 14(a) | 2 or 4 or 7 or 49                                                   | M1   |                                                       |
|       | 2 and 4 and 7                                                       | M1   | accept 49 for 7                                       |
|       | 57 with 2 and 4 and 7 seen                                          | A1   | accept 49 for 7<br>condone 60 with 2 and 4 and 7 seen |
|       | <b>Additional Guidance</b>                                          |      |                                                       |
|       | Ignore multiplication and/or addition of the given numbers          |      |                                                       |
|       | 57 from multiplication and addition of values other than 2, 4 and 7 |      | M0M0A0                                                |

| Q     | Answer                                                                                                                                | Mark | Comments                      |
|-------|---------------------------------------------------------------------------------------------------------------------------------------|------|-------------------------------|
| 14(b) | Overestimate<br>and<br>correct reason<br><b>or</b><br>Underestimate<br>and<br>used 1 and 3 and 6 in part (a)<br>and<br>correct reason | B1   | oe eg every number rounded up |
|       | <b>Additional Guidance</b>                                                                                                            |      |                               |
|       | Every number (was over .5 so) had to be rounded up                                                                                    |      | B1                            |
|       | I rounded them up                                                                                                                     |      | B1                            |
|       | (All) the numbers were closer to the higher number                                                                                    |      | B1                            |
|       | I rounded up                                                                                                                          |      | B0                            |
|       | The number was bigger than the real answer                                                                                            |      | B0                            |

| Q     | Answer                                       | Mark | Comments           |
|-------|----------------------------------------------|------|--------------------|
| 15(a) | $20 \div 2 (= 10)$                           | B1   | oe eg you halve it |
|       | <b>Additional Guidance</b>                   |      |                    |
|       | Ignore any attempt to find an area or volume |      |                    |
|       | $r$ is half of $d$                           |      | B1                 |
|       | $d$ is double $r$                            |      | B1                 |
|       | $10 \times 2 (= 20)$                         |      | B1                 |
|       | $20 - 10 = 10$                               |      | B0                 |
|       | Radius is smaller than diameter              |      | B0                 |

| Q     | Answer                                                            | Mark | Comments                                                                           |
|-------|-------------------------------------------------------------------|------|------------------------------------------------------------------------------------|
| 15(b) | $10^3$ or $10 \times 10 \times 10$ or 1000                        | M1   | [1300, 1334] or [3100, 3142] or [4030, 4192] implies 1000                          |
|       | $\frac{4000}{3} \pi$                                              | A1   | oe in terms of $\pi$<br>condone a multiplication sign<br>SC1 $\frac{32000}{3} \pi$ |
|       | <b>Additional Guidance</b>                                        |      |                                                                                    |
|       | SC1 is from using diameter instead of radius                      |      |                                                                                    |
|       | Accept 1333(. ...) for $\frac{4000}{3}$                           |      |                                                                                    |
|       | $4000\pi \div 3$ (1000 implied)                                   |      | M1A0                                                                               |
|       | Ignore simplification or conversion attempts after correct answer |      |                                                                                    |
|       |                                                                   |      |                                                                                    |

| Q     | Answer                                        | Mark  | Comments |
|-------|-----------------------------------------------|-------|----------|
| 16(a) | $20 = \frac{800}{w}$ or $(w =) \frac{800}{d}$ | M1    | oe       |
|       | $800 \div 20$                                 | M1dep | oe       |
|       | 40                                            | A1    |          |

| Q     | Answer                                    | Mark | Comments |
|-------|-------------------------------------------|------|----------|
| 16(b) | It is greater than the answer to part (a) | B1   |          |

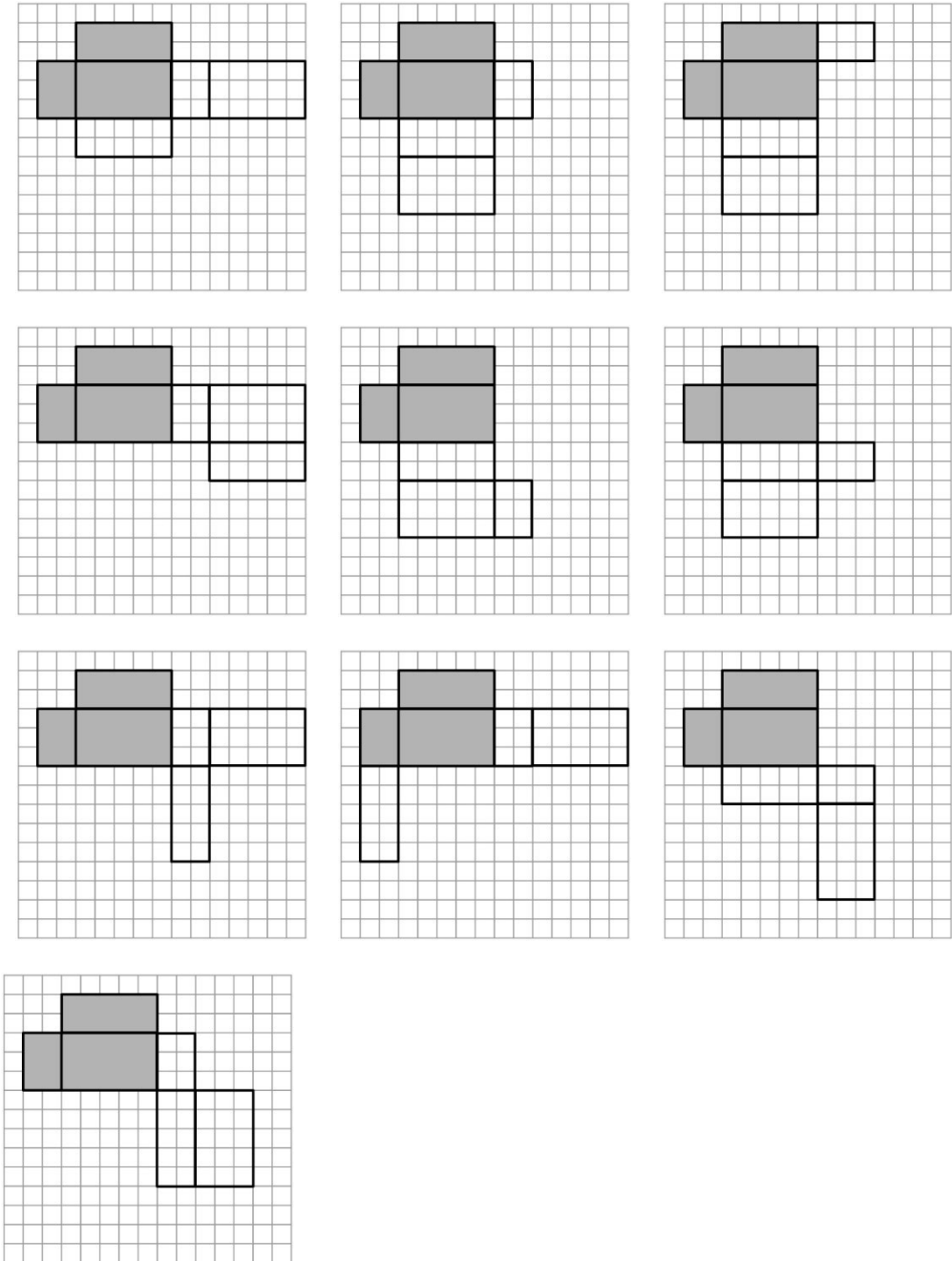
| Q  | Answer                                                                         | Mark | Comments |
|----|--------------------------------------------------------------------------------|------|----------|
| 17 | The chord could be longer than, equal in length to or shorter than the radius. | B1   |          |

| Q  | Answer          | Mark | Comments                                            |
|----|-----------------|------|-----------------------------------------------------|
| 18 | $11 \times 8.5$ | M1   | oe                                                  |
|    | 93.5            | A1   | oe accept 93 or 94 with 93.5 seen<br>SC1 digits 935 |

| Q  | Answer                                                                                        | Mark | Comments    |
|----|-----------------------------------------------------------------------------------------------|------|-------------|
| 19 | True<br>May be true<br>True                                                                   | B3   | B1 for each |
|    | <b>Additional Guidance</b>                                                                    |      |             |
|    | Any unambiguous indication, but if a tick and a cross are used in the same row, mark the tick |      |             |
|    | A row with more than one tick is incorrect for that row                                       |      |             |

| Q     | Answer                       | Mark | Comments                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|-------|------------------------------|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 20(a) | $6 \times 10^{-3}$           | B2   | condone extra zeros which do not affect the value eg $6.0 \times 10^{-3}$<br>B1 correct value not in standard form (allow value written as $a \times 10^n$ )<br>eg 0.006 or $0.6 \times 10^{-2}$<br><b>or</b><br>given calculation with 0.6 written as $6 \times 10^{-1}$ eg $6 \times 10^{-1} \div 100$<br><b>or</b><br>value whose only non-zero digit is 6 correctly converted to standard form answer<br>eg $0.0006 = 6 \times 10^{-4}$ |
|       | Additional Guidance          |      |                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|       | $6 \times 10^{-1} \div 10^2$ |      | B1                                                                                                                                                                                                                                                                                                                                                                                                                                          |

| Q     | Answer            | Mark | Comments                                                                                                                                                                                                                                                                                                                                              |
|-------|-------------------|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 20(b) | $1.2 \times 10^8$ | B2   | condone extra zeros which do not affect the value eg $1.20 \times 10^8$<br>B1 120 000 000 or 120 million<br>or $12 \times 10^7$ or $120 \times 10^6$<br>or $1.2 \times 10^a \times 10^b$ where $a + b = 8$<br><b>or</b><br>value whose only non-zero digits are 12 correctly converted to standard form answer<br>eg $12\,000\,000 = 1.2 \times 10^7$ |

| Q  | Answer                                                                                                 | Mark | Comments                                                                |
|----|--------------------------------------------------------------------------------------------------------|------|-------------------------------------------------------------------------|
| 21 | Fully correct net                                                                                      | B2   | B1 one or two correctly sized rectangles drawn in appropriate positions |
|    | <b>Additional Guidance</b>                                                                             |      |                                                                         |
|    | Mark intention but must be wholly on the grid.<br>Ignore any 'tabs' drawn                              |      |                                                                         |
|    | <p>B2 examples</p>  |      |                                                                         |

| Q  | Answer                                                                                                                  | Mark | Comments        |
|----|-------------------------------------------------------------------------------------------------------------------------|------|-----------------|
| 22 | $330 \div (1 + 2)$ or 110 or 220                                                                                        | M1   | oe              |
|    | 110 in Year 10 and 220 in Year 11                                                                                       | A1   |                 |
|    | 52 in Year 10 Medal<br>and<br>73 in Year 11 Medal                                                                       | B1   |                 |
|    | Year 10 Medal + Year 10 No medal<br>= Year 10<br>and<br>Year 11 Medal + Year 11 No medal<br>= Year 11                   | B1ft | ft their values |
|    | <b>Additional Guidance</b>                                                                                              |      |                 |
|    | Diagram takes precedence                                                                                                |      |                 |
|    | If the values are given as probabilities, with the required value as the numerator, withhold the first A mark or B mark |      |                 |
|    |                                                                                                                         |      | M1A1B1B1        |

| Q  | Answer                                                                                                        | Mark | Comments                                                          |
|----|---------------------------------------------------------------------------------------------------------------|------|-------------------------------------------------------------------|
| 23 | Correct method to divide by $\frac{1}{2}$                                                                     | M1   | implied by 0.4 or $\frac{2}{5}$ or $\frac{1}{2.5}$                |
|    | Correct method to add two fractions with different denominators                                               | M1   | implied by $\frac{7}{15}$                                         |
|    | $\frac{2}{3}$                                                                                                 | A1   | oe fraction eg $\frac{10}{15}$<br>SC2 $\frac{14}{15}$ oe fraction |
|    | <b>Additional Guidance</b>                                                                                    |      |                                                                   |
|    | SC2 is from $\left(\frac{4}{15} + \frac{1}{5}\right) \div \frac{1}{2}$                                        |      |                                                                   |
|    | Ignore incorrect simplification of a correct fraction to another fraction<br>eg $\frac{10}{15} = \frac{4}{5}$ |      | M1M1A1                                                            |
|    | Correct answer in working but answer given as a decimal                                                       |      | M1M1A0                                                            |

| Q  | Answer        | Mark | Comments |
|----|---------------|------|----------|
| 24 | $\frac{2}{5}$ | B1   |          |

| Q  | Answer | Mark | Comments |
|----|--------|------|----------|
| 25 | 1      | B1   |          |

| Q  | Answer                                                                                                                                                                                                                          | Mark  | Comments                                                                                                                                                                                                                                  |
|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 26 | $x^2 + 2x - 5x - 10$                                                                                                                                                                                                            | M1    | oe with brackets expanded<br>four terms in any order with three correct<br>from $x^2$ (+)2x -5x -10<br>terms may be seen in a grid<br>implied by $x^2 - 3x + k$ ( $k \neq 0$ )<br>or $ax^2 - 3x - 10$ ( $a \neq 0$ )                      |
|    | $x^2 - 3x - 130 (= 0)$                                                                                                                                                                                                          | M1dep | oe expression/equation with brackets expanded<br>eg $x^2 + 2x - 5x - 10 = 120$                                                                                                                                                            |
|    | For their three-term quadratic,<br><br>correctly factorises<br><br>or correctly substitutes into the quadratic formula<br><br>or correctly completes the square to the form $x = \dots$ for their quadratic<br>or<br>-10 and 13 | M1    | do not accept $x^2 - 3x - 10 (= 0)$ as their three-term quadratic<br>eg $(x + 10)(x - 13) (= 0)$<br>eg $\frac{- -3 \pm \sqrt{(-3)^2 - 4 \times 1 \times -130}}{2 \times 1}$<br>eg $(x =) 1.5 \pm \sqrt{\left(\frac{3}{2}\right)^2 + 130}$ |
|    | 13                                                                                                                                                                                                                              | A1    | SC1 31.5 oe                                                                                                                                                                                                                               |
|    | <b>Additional Guidance</b>                                                                                                                                                                                                      |       |                                                                                                                                                                                                                                           |
|    | The first and third marks may be awarded for correct work with no answer or incorrect answer, even if this is seen amongst multiple attempts                                                                                    |       |                                                                                                                                                                                                                                           |
|    | SC1 is for using the perimeter                                                                                                                                                                                                  |       |                                                                                                                                                                                                                                           |
|    | Trial and improvement is 0, 3 (for -10 and 13) or 4 marks                                                                                                                                                                       |       |                                                                                                                                                                                                                                           |