

Reasoning Answers

M1.257

[1]

M2. Award **TWO** marks for three numbers correct as shown:

19	38	76	152	304
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If the answer is incorrect, award **ONE** mark for two numbers correct.

Up to 2

[2]

M3.

(a) 499

1

(b) 555

1

[2]

M4.

$$\begin{array}{|c|c|} \hline 6 & 1 \\ \hline \end{array} - \begin{array}{|c|c|} \hline 2 & 7 \\ \hline \end{array} = 34$$

U1

[1]

M5.

Award **TWO** marks for numbers in order as shown:

68 82 96 **110** 124 138 152

If the answer is incorrect, award **ONE** mark for two numbers correct.

Up to 2m

[2]

M6.

Award **TWO** marks for:

$$\begin{array}{r} 15\boxed{1} \\ + 4\boxed{6}4 \\ \hline \boxed{6}15 \end{array}$$

If the answer is incorrect, award **ONE** mark for two digits correct.

Up to 2m

[2]

M7.

(a) **c AND e**

Letters may be given in either order.

1

(b) **a AND d**

Letters may be given in either order.

1

[2]

M8.

A

*Accept alternative unambiguous positive indications
of the correct triangle, e.g. $2\frac{1}{2}$ or 2.5.*

[1]

M9.(a) Paris

1

(b) 3

Do not accept -3.

1

[2]

M10.

$$\frac{\boxed{2}}{3} = \frac{8}{12} = \frac{4}{\boxed{6}}$$

[2]

M11.

Award **TWO** marks for the correct answer of 25p.

If the answer is incorrect, award **ONE** mark for evidence of an appropriate method, e.g.

- $168 \div 2 = 84$
 $109 - 84$

OR

- $168 \div 6 = 28$
 $3 \times 28 = 84$
 $109 - 84$

*Accept for **TWO** marks, an answer given in the acceptable notation.*

*Answer need not be obtained for the award of **ONE** mark.*

*Accept for **ONE** mark an answer of 0.25p **OR** £25p **OR** £25 as evidence of an appropriate method.*

Up to 2m

[2]

M12.(a) blue **AND** white

*Colours may be given in either order.
Accept unambiguous abbreviations or recognisable misspellings.*

1

(b) 600

1

(c) 75

1

[3]

M13.

Numbers circled as shown:

200 2,000 **5,000** 50,000

Accept alternative unambiguous positive indications, e.g. numbers ticked or underlined.

[1]

M14.15

2

or

6(cm) and 1.5(cm) seen (*the dimensions of the rectangle*)

OR

Shows or implies a complete correct method, eg:

- $\sqrt{36} = 8$ (*error*)
 $8 \div 4 = 2$
 $2 \times (8 + 2)$

- $6 \times 6 = 36$
 $6 \div 4 = 1.2$ (*error*)
 $6 + 1.2 + 6 + 1.2$

Do not accept confusion between area and perimeter, ie:

- *side of square is* $36 \div 4 = 9$ (*error*)
 $2 \times (9 + 2.25)$

1

[2]

M15. 7 minutes to 9 **OR** 8:53

[1]

M16.

(a) 9,999,995

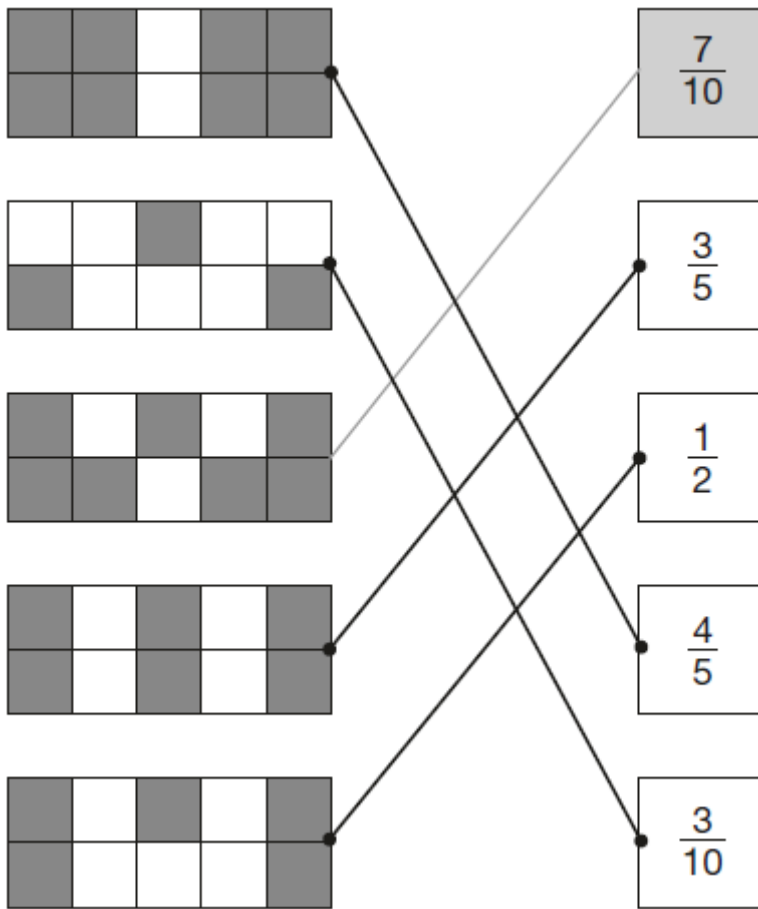
1

(b) 5,900,000

1

[2]

M17. Award **TWO** marks for four shapes matched correctly as shown:



If the answer is incorrect, award **ONE** mark for three shapes matched correctly.

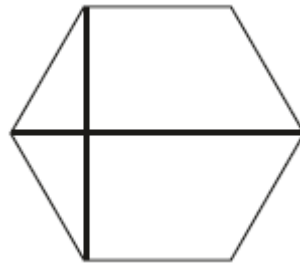
Lines need not touch shapes or fraction boxes, provided the intention is clear.

Do not credit any shape that has been matched to more than one fraction.

Up to 2

[2]

M18.Diagram completed as shown:



OR



Accept slight inaccuracies in drawing, provided the intention is clear.

Diagrams may be completed in any orientation.

U1

[1]

M19.

$(-10, -40)$

[1]

M20.

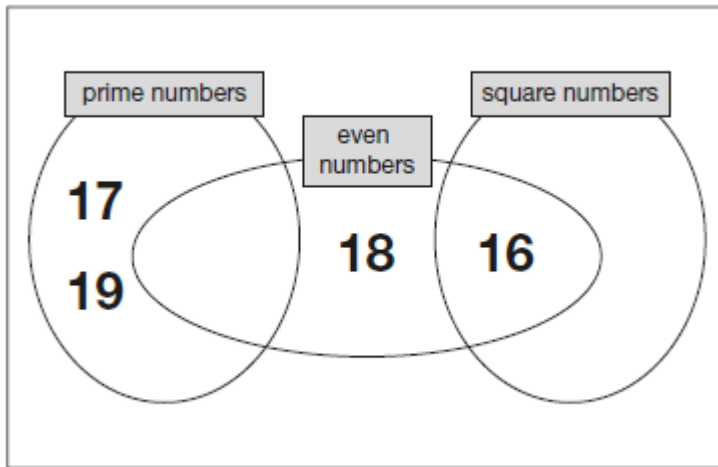
24 **AND** 48 only

Numbers may be given in either order.

[1]

M21.

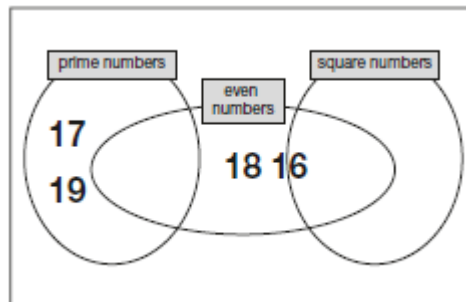
Award **TWO** marks for all four numbers placed correctly as shown:



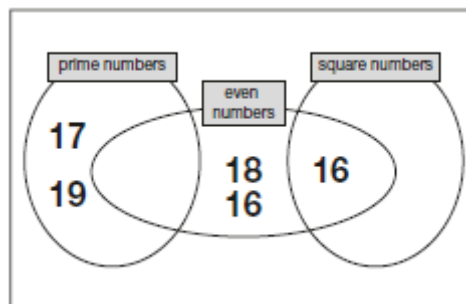
If the answer is incorrect, award **ONE** mark for three numbers placed correctly.

Accept alternative unambiguous indications, e.g. lines drawn from the numbers to the appropriate regions of the diagram.

Do not accept numbers written in more than one region, e.g.



OR



Up to 2m

[2]

M22.

Award **TWO** marks for the correct answer of 30.

If the answer is incorrect, award **ONE** mark for evidence of an appropriate method, e.g.

- $1.5 \text{ kg} = 1,500 \text{ g}$
 $1,500 \div 50$

*Answer need not be obtained for the award of **ONE** mark.*

*Units must be converted correctly for the award of **ONE** mark.*

Up to 2m

[2]

M23.

Award **TWO** marks for the correct answer of £11.40.

If the answer is incorrect, award **ONE** mark for evidence of an appropriate method, e.g.

- $\text{£}1.25 + \text{£}1.60 = \text{£}2.85$
 $\text{£}2.85 \times 4$

*Accept for **ONE** mark an answer of £1,140 **OR** £1,140p **OR** £11.4 as evidence of an appropriate method.*

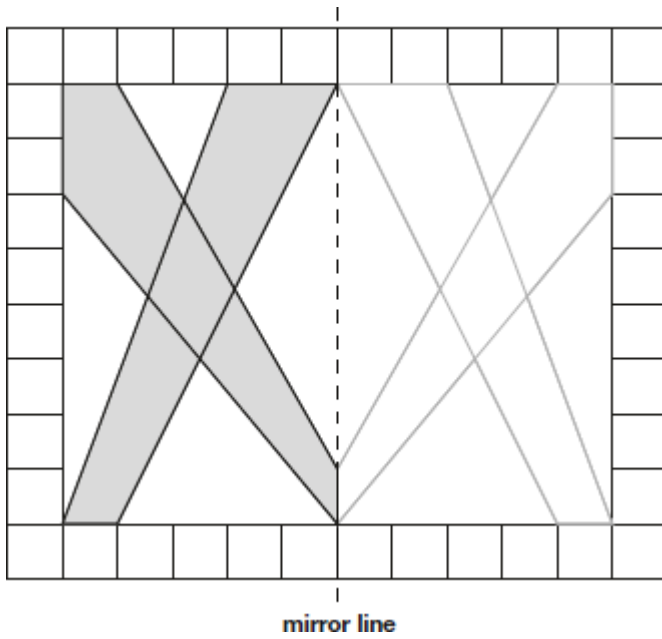
*Answer need not be obtained for the award of **ONE** mark.*

Up to 2m

[2]

M24.

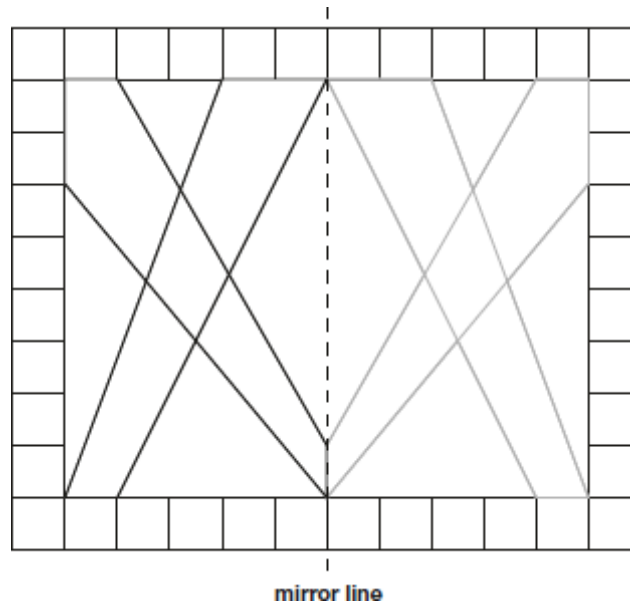
Diagram completed correctly as shown:



Accept inaccurate drawing, provided the intention is clear.

Diagram need not be shaded.

Diagram need not include edges drawn along the gridlines, e.g.



[1]

M25. Gives a correct explanation which demonstrates how the graph shows two children could be taller than Alfie, eg:

- One person from the class is 160-169cm. But someone as well as this person could be taller than Alfie. 2 people range from 150-159 cm, the other person could be 154, 155, etc

Minimally acceptable explanation, eg:

- *It could be 1.64, 1.56, Alfie*
- *It depends on how tall the other person in his height group is*
- *There could be someone between 150-159 cm who is taller than Alfie*

! Condone incorrect use of boundary values, eg:

- *One child is in the range 160 cm–169 cm.
Don't know how tall the other child
between 150 cm and 159 cm is*

Do not accept incomplete or incorrect explanation,
eg:

- *There is 1 child in the range 150 cm-159 cm
taller
than Alfie*
- *There could be two children taller than Alfie*

[1]