BASIC AREA (Triangles, Rectangles, Parallelograms and Trapeziums)

GRADE 2

AtoZrevision

Examination practice questions

You should have:

A ruler, protractor, compasses, a pen, pencil, eraser, calculator.
For some questions, you may need tracing paper.

Instructions

- Use **black** ink or ball-point pen.
- Answer the questions in the spaces provided – *there may be more space than you need.*
- **Calculators may be used.**

Information

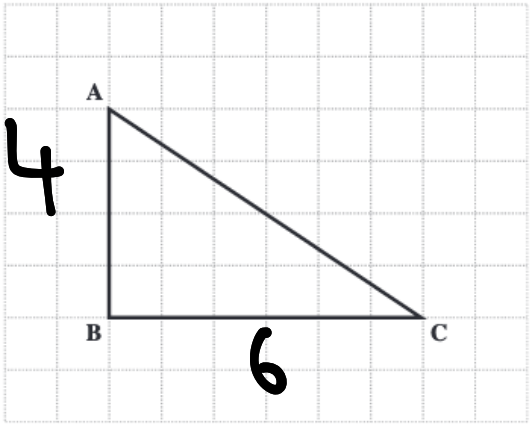
- The marks for each question are shown in brackets.
- If the number of marks for two similar questions isn't the same, this is likely due to them being modelled on different specifications. In this case, it is worth considering both mark schemes.
- Use the number of marks for each question as a guide as to how much time to spend on each question. As a rough guide, you can multiply the number of marks by 1.2 to see how many minutes you should spend on a question.
- Questions will generally get more challenging as the document progresses. Some of the latter questions will go beyond the core grade level for this topic.

Advice

- Read each question carefully before you start to answer it.
- Don't forget to have fun.
- Check your answers at the end.

Q1. AtoZrevision.com

Work out the area of the triangle ABC drawn on the centimetre grid below.



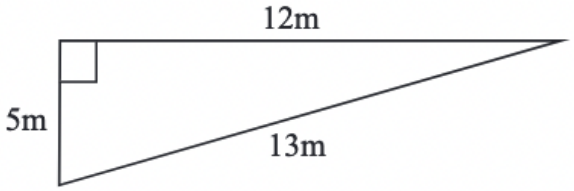
$\frac{4 \times 6}{2} = 12$ m,

A1 12 cm²

(2 marks)

Q2. AtoZrevision.com

Find the area of this triangle.



M1 $5 \times 12 = 60$

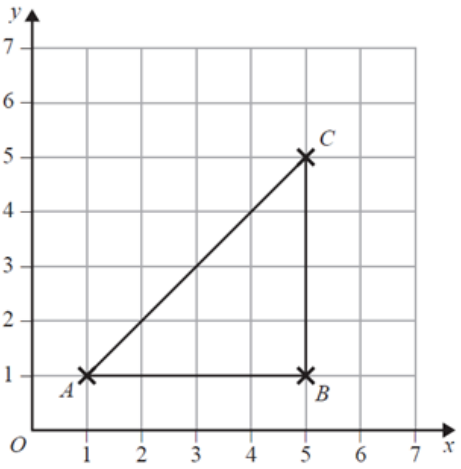
$60 \div 2 = 30$

A1 30 m²

(2 marks)

Q3. AtoZrevision.com

The diagram shows triangle ABC drawn on a centimetre grid.



Find the area of triangle ABC.

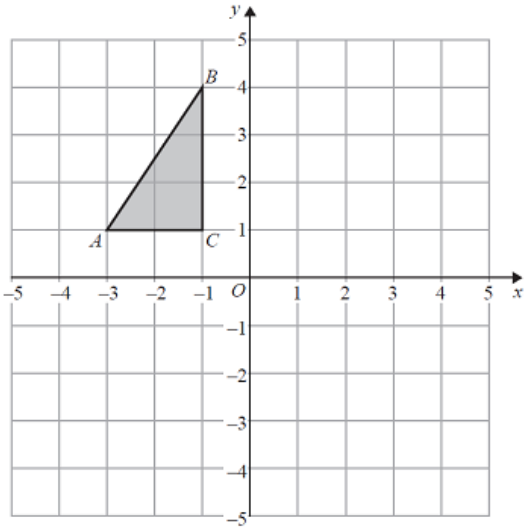
M1 $\frac{4 \times 4}{2} = 8$

A1 8 units²

(2 marks)

Q4. AtoZrevision.com

The diagram shows triangle ABC drawn on a centimetre grid.



Work out the area of triangle ABC.

M1 $\frac{3 \times 2}{2} = 3$

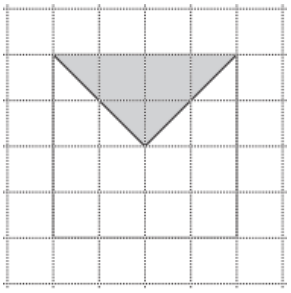
A1 3 units²

(2 marks)

Q5. AtoZrevision.com

Look at the diagram on the centimetre square grid.

Work out the area that is shaded on the diagram.



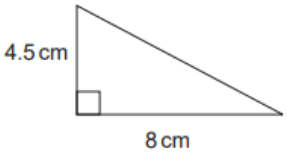
$\frac{4 \times 2}{2} = 4$ M1

A1 4 units²

(2 marks)

Q6. AtoZrevision.com

Here is a right-angled triangle.



Not drawn accurately

Find the area of the triangle.

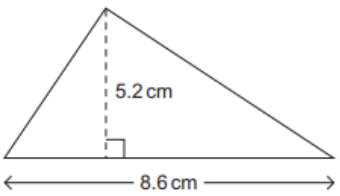
M1 $\frac{4.5 \times 8}{2} = 18$

A1 18 cm²

(2 marks)

Q7. AtoZrevision.com

Work out the area of the triangle.



Not drawn accurately

Give your answer to 1 decimal place.

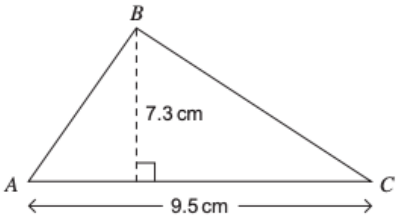
M1 $\frac{5.2 \times 8.6}{2} =$

A1 22.4 cm²

(2 marks)

Q8. AtoZrevision.com

The diagram shows a triangle ABC.



Not drawn accurately

Work out the area of the triangle.
Give your answer to 1 decimal place.

$\frac{7.3 \times 9.5}{2} = 34.7 \text{ cm}^2$

M1 A1

.....

(2 marks)

Q9. AtoZrevision.com

Here is a rectangle.

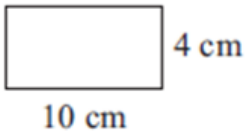


Diagram **NOT** accurately drawn

The length of the rectangle is 10 cm.
The width of the rectangle is 4 cm.

Work out the area of the rectangle.

$10 \times 4 = 40 \text{ cm}^2$

M1 A1

.....

(2 marks)

Q10. AtoZrevision.com

The lawn in the garden is rectangular.
It has length 4.5 metres and width 3 metres.

What is the area of the lawn?

$4.5 \times 3 = 13.5 \text{ m}^2$

M1 A1

.....

(2 marks)

Q11. AtoZrevision.com

The lawn in the garden is rectangular.
It has length 4.5 metres and width 3 metres.

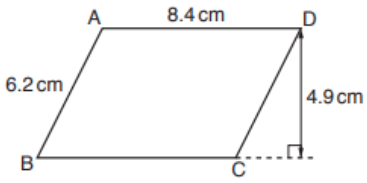
What units should be used for the area of the lawn? Circle the correct answer.

m cm m^2 m^3 yards

(2 marks)

Q12. AtoZrevision.com

The diagram shows a parallelogram $ABCD$.



Not to scale

Work out the area of the parallelogram.

$4.9 \times 8.4 = 41.2\text{ cm}^2$

A1

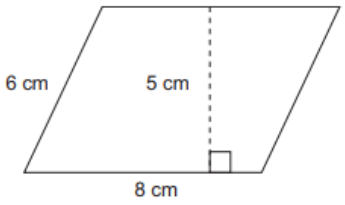
M1

.....

(2 marks)

Q13. AtoZrevision.com

Work out the area of this parallelogram.



Not drawn accurately

A1

$8 \times 5 = 40$

40 cm^2

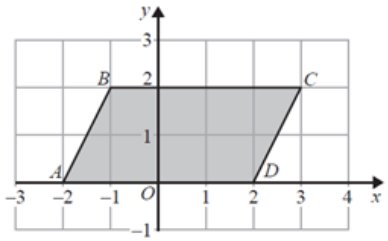
NB A1 for correct units!

.....

(2 marks)

Q14. AtoZrevision.com

The diagram shows a quadrilateral $ABCD$ on a centimetre grid.



Work out the area of the quadrilateral $ABCD$

M1 2 x 4

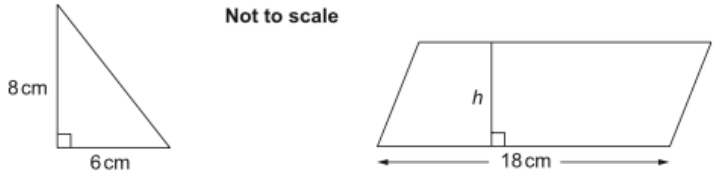
A1 8 cm²

.....

(2 marks)

Q15. AtoZrevision.com

The area of the parallelogram is three times the area of the triangle.



Find the length of the perpendicular height h of the parallelogram.

B1 $\frac{8 \times 6}{2} = 24$

Area is B1

24 x 3 = 72

B1 72 / 18 = 4

A1 4 cm

.....

(4 marks)

Q16. AtoZrevision.com

The diagram shows a right-angled triangle and a parallelogram.

The area of the parallelogram is 5 times the area of the triangle.
The perpendicular height of the parallelogram is h cm.

Find the value of h

B1 $\frac{16 \times 9}{2} = 72$

Area is 5 1

$72 \times 5 = 360$

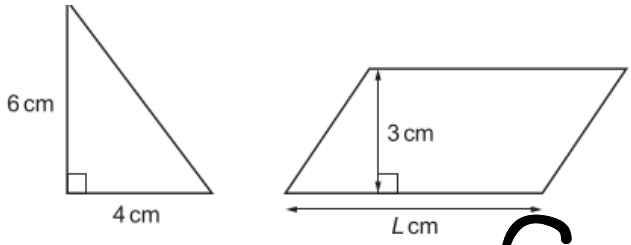
B1 $360 / 30 = 12$

A1 12cm

(4 marks)

Q17. AtoZrevision.com

The area of the parallelogram is four times the area of the triangle.



Calculate the length, L, of the parallelogram.

Calculate the length, L, of the parallelogram.

B1 $\frac{6 \times 4}{2} = 12$

Area is $12 \times 4 = 48$ B1

B1 $48 / 3 = 16$

16cm

A1

(4 marks)

Q18. AtoZrevision.com

Here is a diagram of a trapezium.

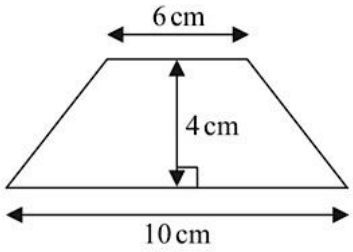


Diagram **NOT** accurately drawn

Work out the area of the trapezium.

$\frac{1}{2}(6+10)\times 4$ M1

A1 32 cm²

.....

(2 marks)

Q19. AtoZrevision.com

The diagram shows a trapezium.

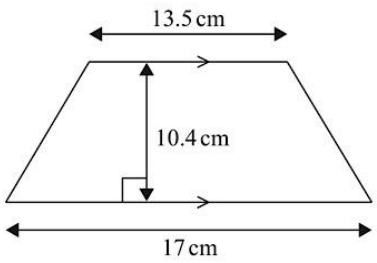


Diagram **NOT** accurately drawn

Work out the area of the trapezium.

$0.5(13.5+17)\times 10.4$ M1

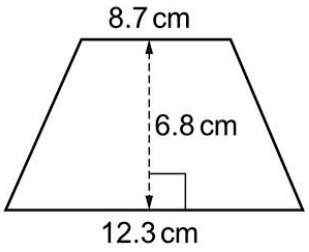
$= 158.6\ \text{cm}^2$ A1

.....

(2 marks)

Q20. AtoZrevision.com

Calculate the area of this trapezium.



Not to scale

$\frac{1}{2}(12.3 + 8.7) \times 6.8$

M1

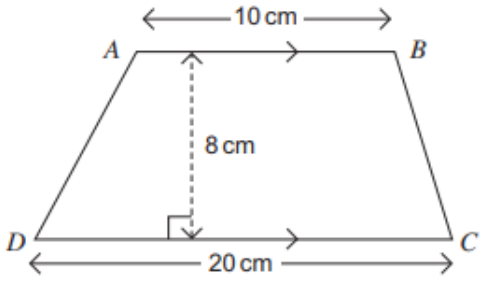
$= 71.4\text{cm}^2$ A1

.....

(2 marks)

Q21. AtoZrevision.com

$ABCD$ is a trapezium.



Not drawn accurately

Calculate the area of $ABCD$.

M1 $\frac{1}{2}(20+10) \times 8$

$= 120\text{cm}^2$ A1

.....

(2 marks)

Q22. AtoZrevision.com

ABCD is a trapezium.

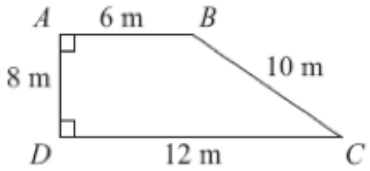


Diagram **NOT** accurately drawn

Work out the area of the trapezium.

$\frac{1}{2}(12+6) \times 8 = 72$ M1

A1

72cm^2

.....

(2 marks)

QUESTIONS FROM MATHEMATICAL COMPETITIONS

Q23. AtoZrevision.com

Onkon wants to cover his rooms floor with his Favourite red carpet. How many square yards of red carpet are required to cover a rectangular floor that is 12 feet long and 9 feet wide? (There are 3 feet in a yard.) Tick the correct answer.

$12\,ft \times 9\,ft$

$= 4y \times 3y$

$= 12y^2$

- 12 ✓
- 36
- 108
- 324
- 972

Q24. AtoZrevision.com

Six rectangles each with a common base width of 2 have lengths of 1, 4, 9, 16, 25, and 36. What is the sum of the areas of the six rectangles? Tick the correct answer.

2×1 2×16

2×4 2×25

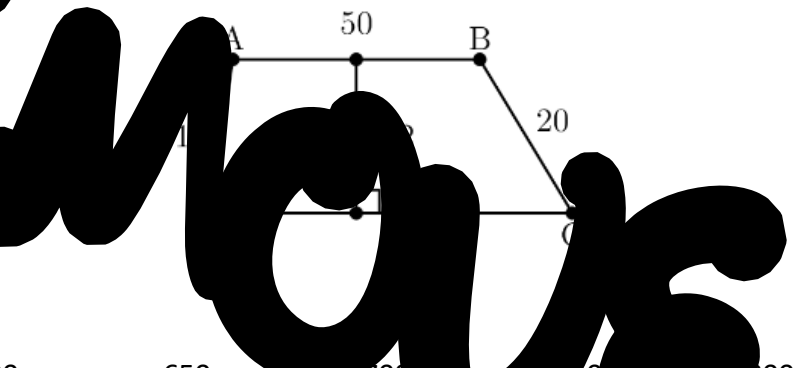
2×9 2×36

Sum : 182

- 91
- 93
- 162

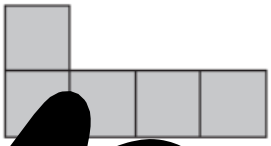
Q25. AtoZrevision.com

ateral $ABCD$ is a trapezoid, $AD = 15$, $AB = 50$, $BC = 20$, and the altitude is 12. What is the area of ezium? e correct answer.



Q26. AtoZrevision.com

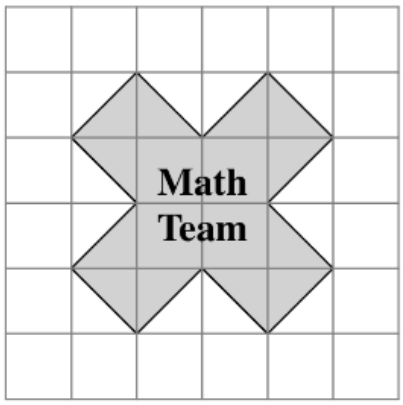
Us like the one shown in the diagram, Zara wants to make a complete square without gaps o



What is the number

Q27. AtoZrevision.com

The Math Team designed a logo shaped like a multiplication symbol, shown below on a grid of 1-inch squares.



What is the area of the logo in square inches? Tick the correct answer.

12 half inch triangles ✓

4 inch squares (middle)

$4 + \frac{1}{2}(12) = 10$

10
12
13
14
15