

Edexcel GCSE

Mathematics (Linear) – 1MA0

AREA OF COMPOUND SHAPES SOLUTIONS

Materials required for examination

Ruler graduated in centimetres and millimetres, protractor, compasses, pen, HB pencil, eraser.

Tracing paper may be used.

Items included with question papers

Nil



Instructions

Use black ink or ball-point pen.

Fill in the boxes at the top of this page with your name, centre number and candidate number.

Answer all questions.

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 – use this as a guide as to how much time to spend on **each** question.

Questions labelled with an **asterisk** (*) are ones where the quality of your written communication will be assessed – you should take particular care on these questions with your spelling, punctuation and grammar, as well as the clarity of expression.

Advice

Read each question carefully before you start to answer it.

Keep an eye on the time.

Try to answer every question.

Check your answers if you have time at the end.

1.

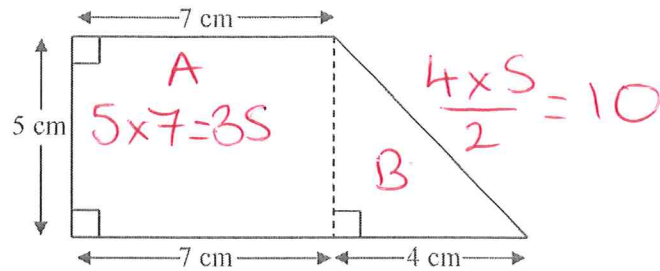


Diagram NOT accurately drawn

Work out the area of the shape.

$$A + B = 35 + 10 = 45$$

..... 45 cm^2
(Total 3 marks)

2.

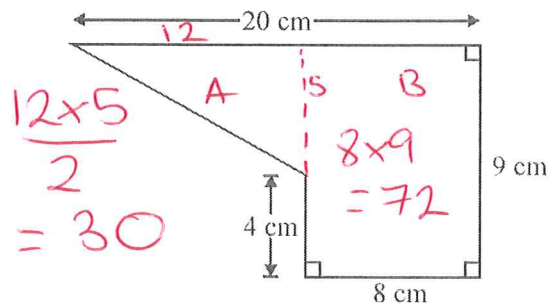


Diagram NOT accurately drawn

The diagram shows a shape.
Work out the area of the shape.

$$A + B = 30 + 72 = 102$$

..... 102 cm^2
(Total 4 marks)

3. Here is a trapezium.

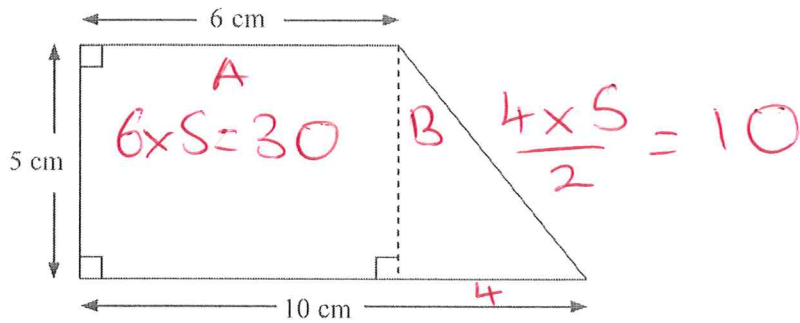


Diagram NOT accurately drawn

Work out the area of the trapezium.

$$A + B = 30 + 10$$

..... 40 cm^2
 (Total 2 marks)

4. The diagram shows a wall with a door in it.

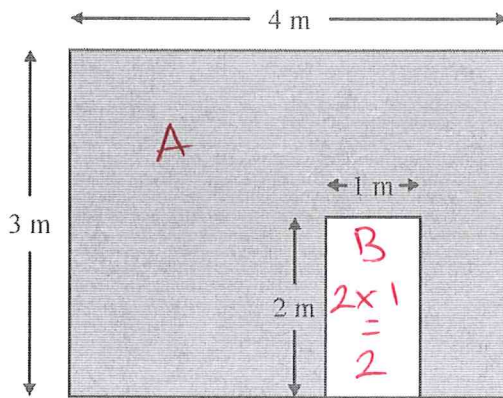


Diagram NOT accurately drawn

Work out the shaded area.

$$A = 4 \times 3 = 12\text{m}^2$$

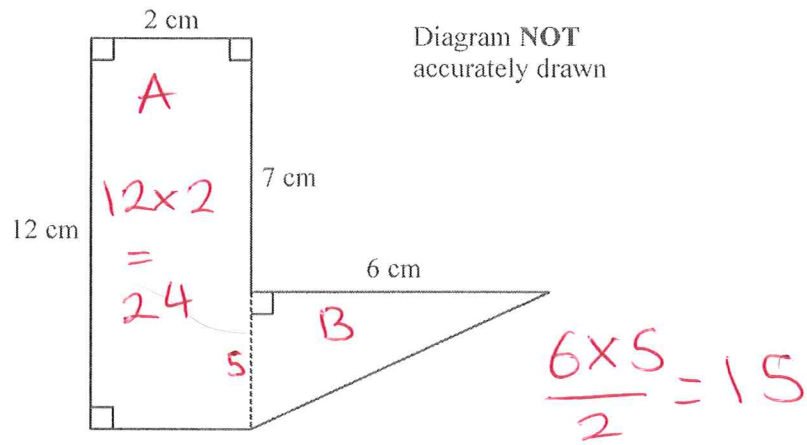
$$B = 2 \times 1 = 2\text{m}^2$$

$$\text{Shaded Area} = A - B$$

$$12 - 2 = 10 \text{ } 10 \text{ m}^2$$

(3)
 (Total 3 marks)

5. The diagram shows a 6-sided shape made from a rectangle and a right-angled triangle.



Work out the total area of the 6-sided shape.

$$A + B = 24 + 15 = 39$$

..... 39 cm^2
(Total 3 marks)

6.

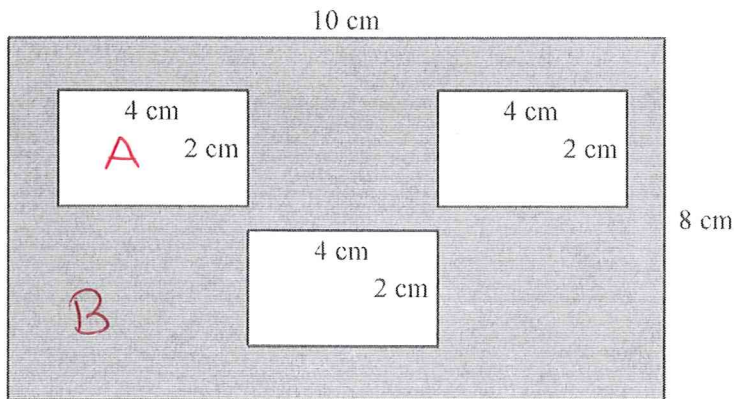


Diagram NOT accurately drawn

The diagram shows 3 small rectangles inside a large rectangle.
The large rectangle is 10 cm by 8 cm.
Each of the 3 small rectangles is 4 cm by 2 cm.

Work out the area of the region shown shaded in the diagram.

$$A = 4 \times 2 = 8$$

$$\text{Total white} = 8 \times 3 = 24$$

$$B = 10 \times 8 = 80$$

$$\text{Shaded Area} = 80 - 24 = 56$$

.....56.....cm²
(Total 3 marks)

7.

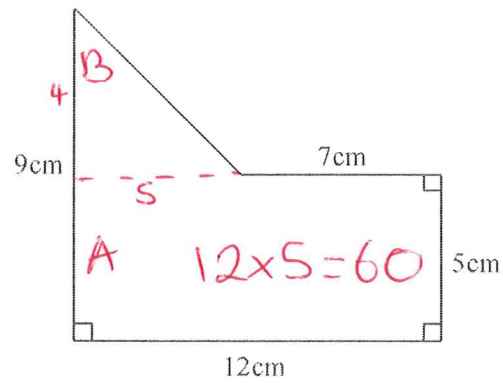


Diagram NOT accurately drawn

Work out the area of the shape.

$$A = 12 \times 5 = 60$$

$$B = \frac{4 \times 5}{2} = 10$$

$$A + B = 60 + 10 = 70$$

..... 70 cm^2
(Total 4 marks)

8.

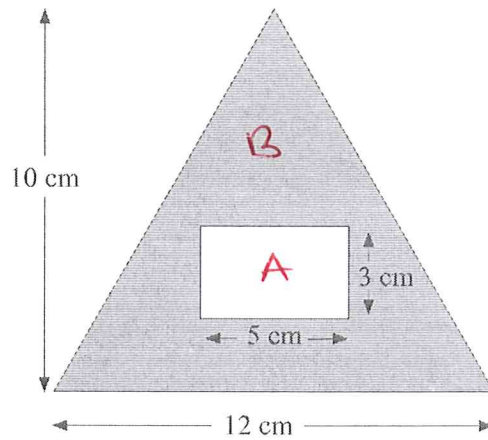


Diagram **NOT** accurately drawn

The diagram shows a rectangle inside a triangle.

The triangle has a base of 12 cm and a height of 10 cm.
The rectangle is 5 cm by 3 cm.

Work out the area of the region shown shaded in the diagram.

$$A = 5 \times 3 = 15$$

$$B = \frac{10 \times 12}{2} = 60$$

$$B - A = 60 - 15 = 45$$

..... 45 cm²
(Total 3 marks)

9.

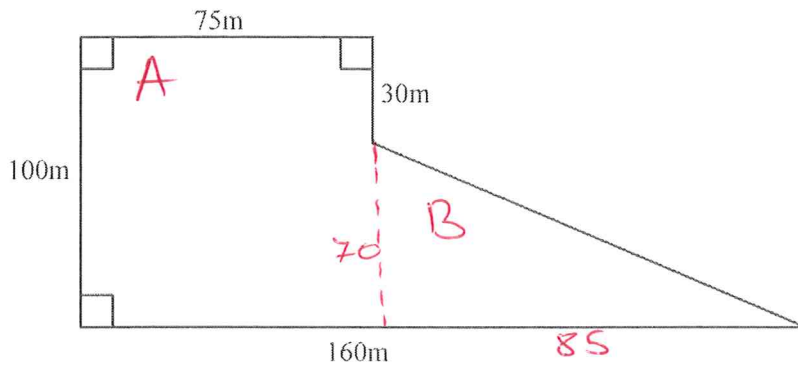


Diagram **NOT** accurately drawn

The diagram shows the plan of a field.
The farmer sells the field for £3 per square metre.

Work out the total amount of money the farmer should get.

$$A = 100 \times 75 = 7500 \text{ m}^2$$

$$B = \frac{70 \times 85}{2} = 2975 \text{ m}^2$$

$$\text{Total Area} = A + B = 7500 + 2975 = 10475 \text{ m}^2$$

$$10475 \times \pounds 3 = \pounds 31425$$

£ 31425

(Total 5 marks)