

- 1 The diagram shows an isosceles triangle.

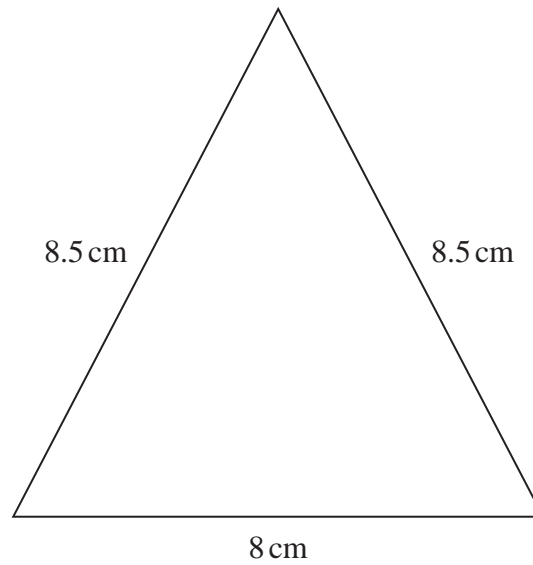


Diagram **NOT**
accurately drawn

Work out the area of the triangle.

.....cm²

(Total for Question 1 is 4 marks)

2 The diagram shows a triangle.

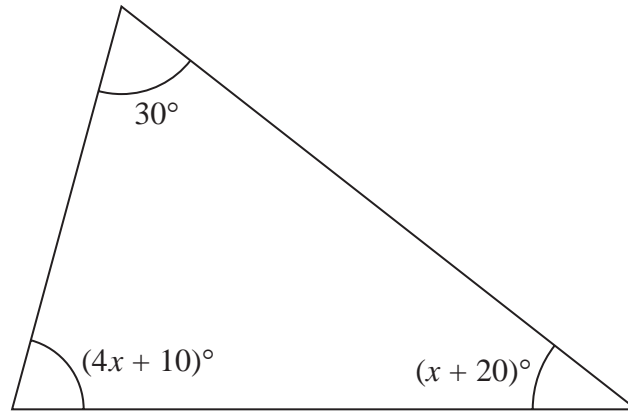


Diagram **NOT**
accurately drawn

Work out the value of x .

$x = \dots\dots\dots$

(Total for Question 2 is 4 marks)

- 3 The diagram shows the isosceles triangle ABC in which $AB = AC$

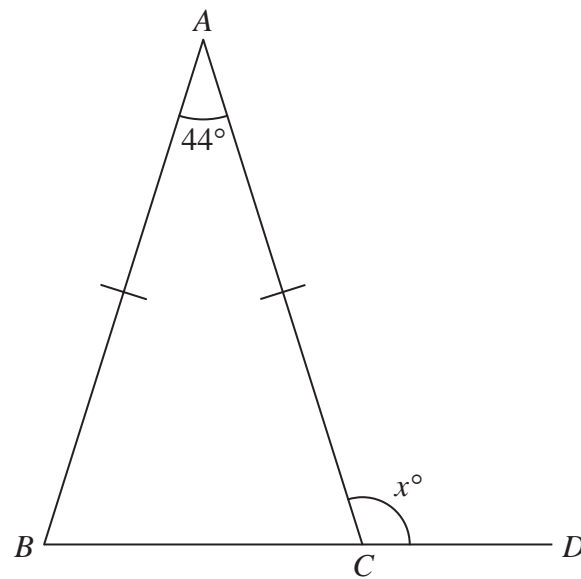


Diagram **NOT**
accurately drawn

BCD is a straight line.

Work out the value of x .

$x = \dots\dots\dots$

(Total for Question 3 is 3 marks)

4 Here is isosceles triangle ABC .

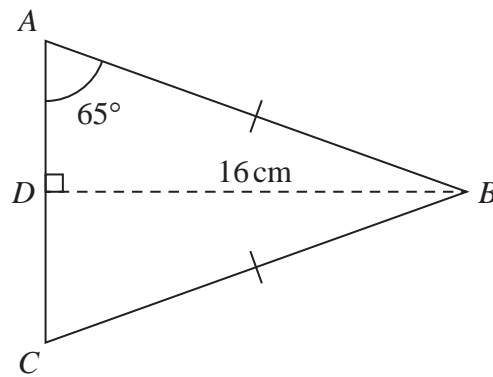


Diagram **NOT**
accurately drawn

D is the midpoint of AC and $DB = 16$ cm.

Angle $DAB = 65^\circ$

Work out the perimeter of triangle ABC .

Give your answer correct to one decimal place.

..... cm

(Total for Question 4 is 4 marks)

5 A , B and C are points on a circle with centre O .

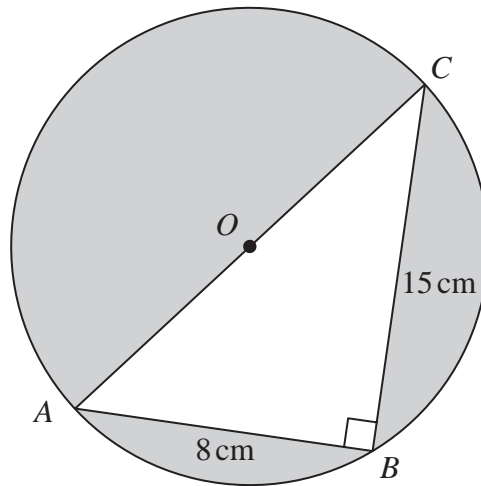


Diagram **NOT**
accurately drawn

AOC is a diameter of the circle.

$AB = 8\text{ cm}$ $BC = 15\text{ cm}$

Angle $ABC = 90^\circ$

Work out the total area of the regions shown shaded in the diagram.
Give your answer correct to 3 significant figures.

.....cm²

(Total for Question 5 is 5 marks)

- 6 The diagram shows a shape $ABCDEFG$ made from a square $ABDF$ and three identical isosceles triangles BCD , DEF and FGA .

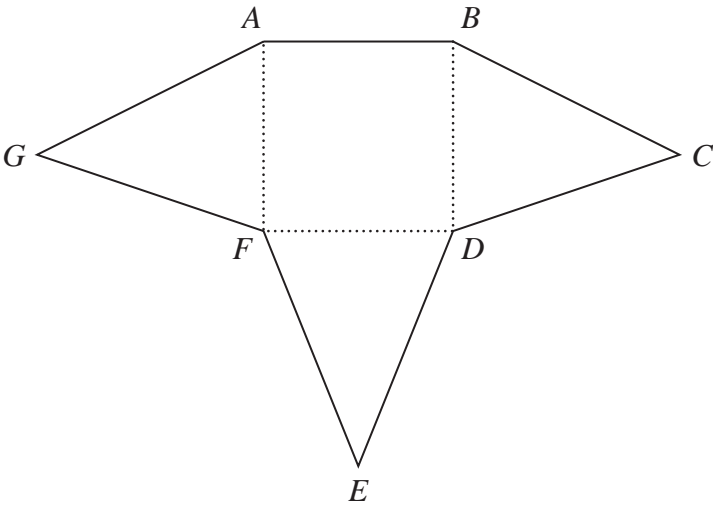


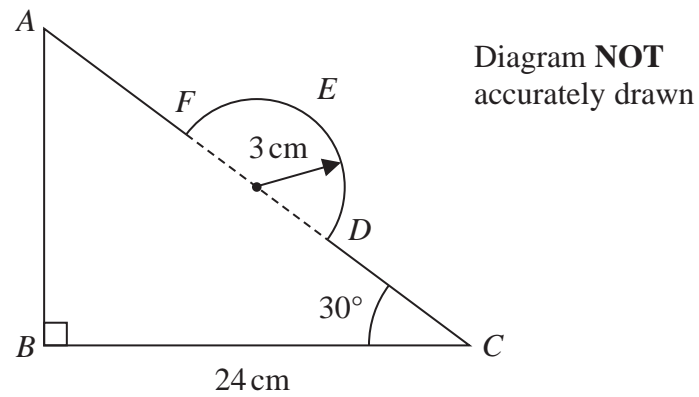
Diagram **NOT**
accurately drawn

The perimeter of the square $ABDF$ is 48 cm.
The perimeter of each isosceles triangle is 30 cm.
Work out the perimeter of the shape $ABCDEFG$.

..... cm

(Total for Question 6 is 4 marks)

7 In the diagram, ABC is a right-angled triangle and DEF is a semicircular arc.



In triangle ABC

$$BC = 24 \text{ cm}$$

$$\text{angle } ABC = 90^\circ$$

$$\text{angle } BCA = 30^\circ$$

The points D and F lie on AC so that DF is the diameter of the semicircular arc DEF
 The radius of the semicircular arc is 3 cm.

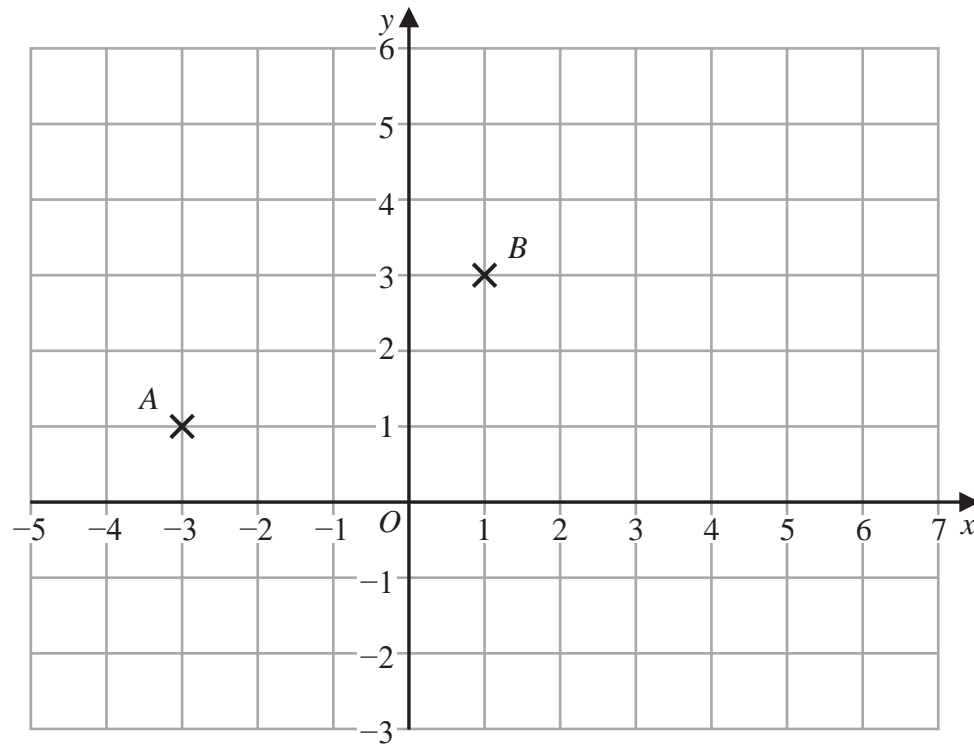
Work out the length of $AFEDC$

Give your answer correct to 2 significant figures.

..... cm

(Total for Question 7 is 5 marks)

- 8 The diagram shows points A and B marked on a grid of squares.



D is the point with coordinates $(5, d)$ where $d > 0$
The triangle ABD is an isosceles triangle.

- (c) Find the value of d

$d = \dots\dots\dots$

(1)

(Total for Question 8 is 1 marks)

9

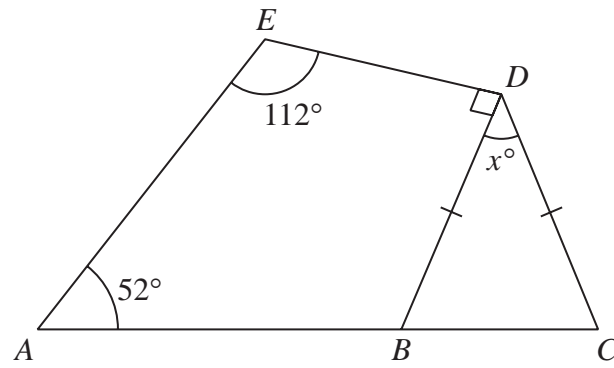


Diagram **NOT**
accurately drawn

BCD is an isosceles triangle with $BD = CD$

ABC is a straight line.

$ABDE$ is a quadrilateral.

Work out the value of x

Give a reason for each stage of your working.

$x =$

(Total for Question 9 is 4 marks)

10 The diagram shows an isosceles triangle ABC

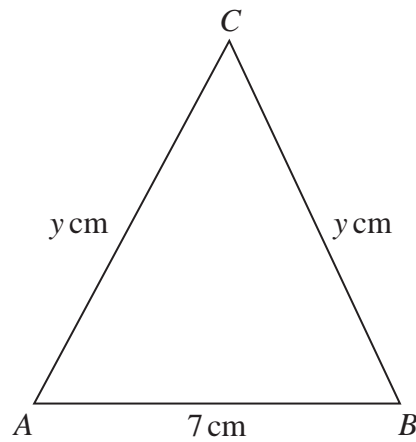


Diagram **NOT**
accurately drawn

$$AB = 7 \text{ cm} \quad AC = BC = y \text{ cm}$$

The area of the triangle is 42 cm^2

Work out the value of y

$$y = \dots\dots\dots$$

(Total for Question 10 is 4 marks)

11 The diagram shows quadrilateral $ABCD$

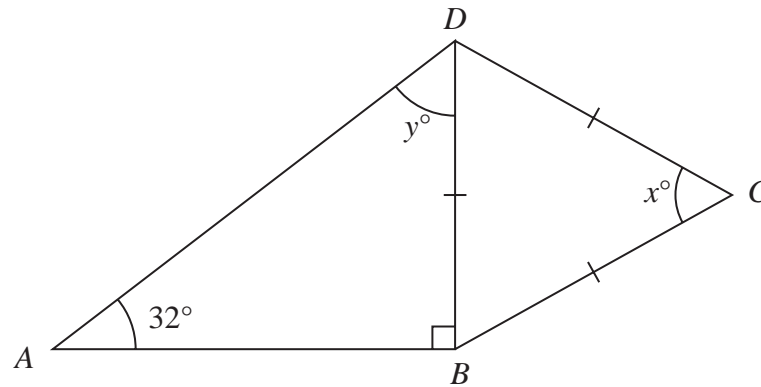


Diagram **NOT**
accurately drawn

$$BC = CD = DB$$

angle $DBA = 90^\circ$ and angle $DAB = 32^\circ$

(a) Work out the value of x

$$x = \dots\dots\dots$$

(1)

(b) (i) Work out the value of y

$$y = \dots\dots\dots$$

(1)

(ii) Give a reason for your answer to (b)(i).

.....

.....

(1)

(Total for Question 11 is 3 marks)