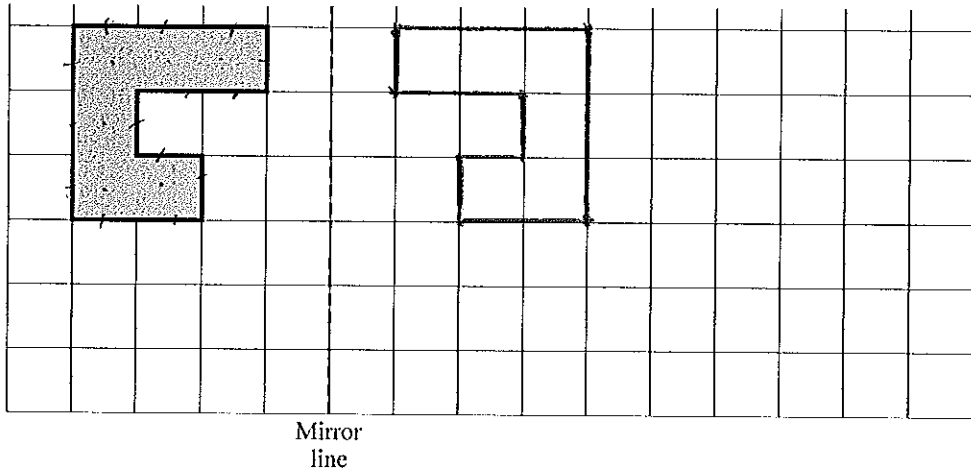


1. A shaded shape is shown on the grid of centimetre squares.



(a) Work out the perimeter of the shaded shape.

.....14.....cm (1)

(b) Work out the area of the shaded shape.

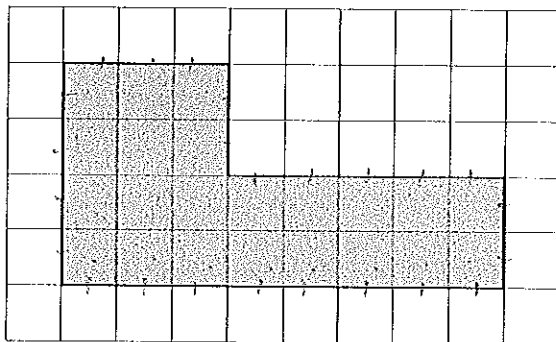
.....6.....cm² (1)

(c) Reflect the shaded shape in the mirror line.

(2)

(4 marks)

2.



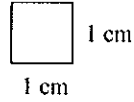
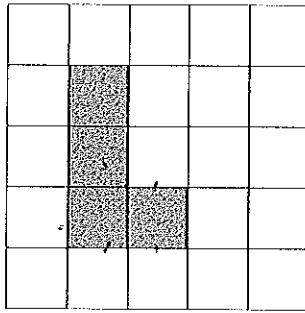
The shaded shape is drawn on a grid of centimetre squares.

(a) Find the perimeter of the shaded shape.24..... cm (1)

(b) Find the area of the shaded shape.22..... cm² (1)

(2 marks)

3.

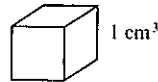
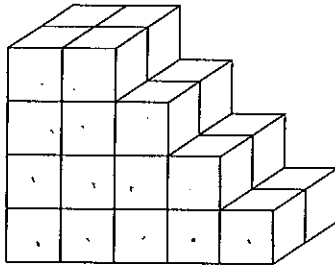


- (a) (i) Find the area of the shaded shape.
 (ii) Find the perimeter of the shaded shape.

.....4..... cm²
10..... cm

(2)

Here is a solid prism made from centimetre cubes.



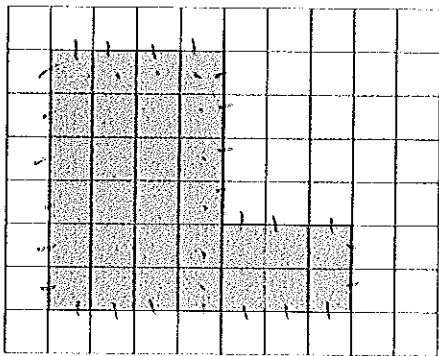
- (b) Find the volume of the solid prism.

.....28..... cm³

(2)

(4 marks)

4.



A shaded shape is shown on the grid of centimetre squares.

- (a) Find the perimeter of the shaded shape.

.....26..... cm

(1)

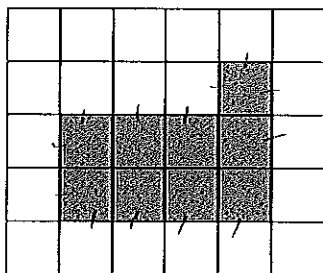
- (b) Find the area of the shaded shape.

.....30..... cm²

(1)

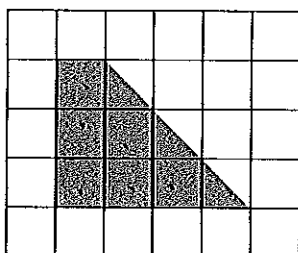
(2 marks)

5. A shaded shape has been drawn on a grid of centimetre squares.



(a) Find the perimeter of the shaded shape.14.....cm (1)

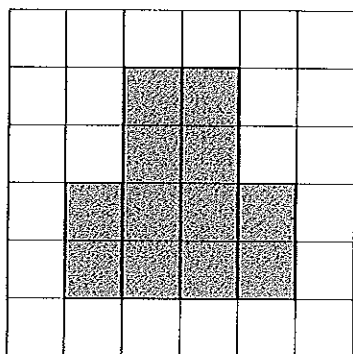
Another shaded shape has been drawn on a grid of centimetre squares.



(b) Find the area of the shaded shape.7.5..... cm² (2)

(3 marks)

6. This shaded shape is drawn on a centimetre grid.

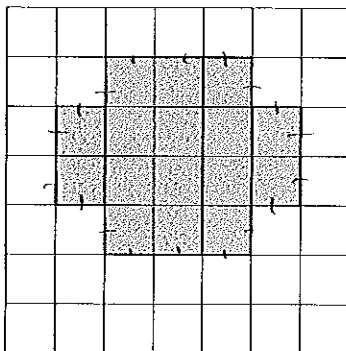


(a) Work out the perimeter of the shaded shape.16..... cm (1)

(b) Work out the area of the shaded shape.12..... cm² (1)

(2 marks)

7.



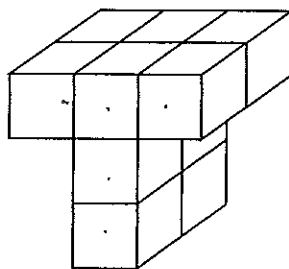
The diagram shows a shaded shape drawn on a centimetre grid.

- (a) Find the area of the shaded shape.
State the units of your answer.

.....16.....cm² (2)

- (b) Find the perimeter of the shaded shape.

.....18.....cm (1)



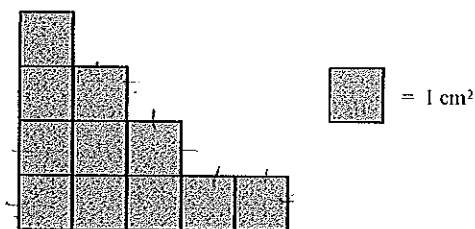
The diagram shows a prism made of centimetre cubes.

- (c) Find the volume of the prism.

.....10.....cm³ (2)

(5 marks)

8.



- (a) Find the area of the shape.

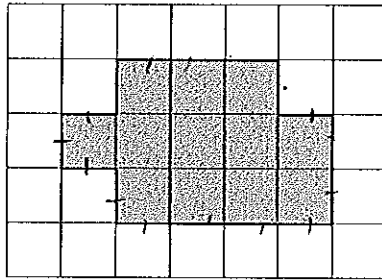
.....11.....cm² (1)

- (b) Find the perimeter of the shape.

.....18.....cm (2)

(3 marks)

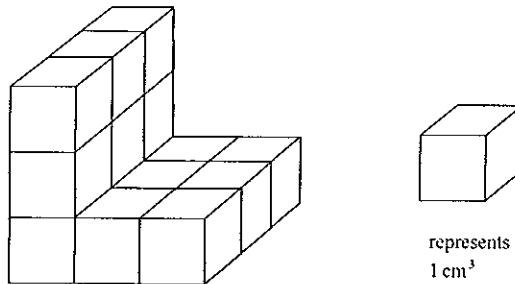
9.



The diagram shows a shaded shape drawn on a centimetre grid.

(a) Work out the perimeter of the shaded shape.16..... cm (1)

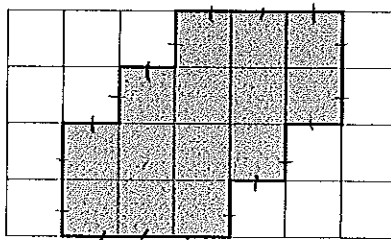
(b) Work out the area of the shaded shape.
State the units of your answer.12 cm²..... (2)



Here is a solid prism made of centimetre cubes.

(c) Find the volume of the solid prism.15..... cm³ (2)
(5 marks)

10. This shaded shape is drawn on a grid of centimetre squares.

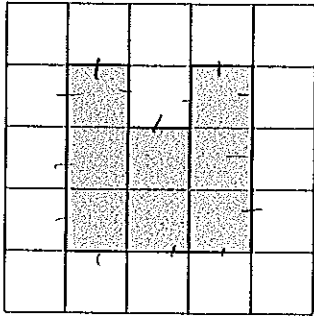


(a) Find the perimeter of the shaded shape.18..... cm (1)

(b) Find the area of the shaded shape.14..... cm² (1)

(2 marks)

11. Here is a shaded shape on a centimetre grid.



(a) Find the area of the shaded shape.

.....8..... cm^2

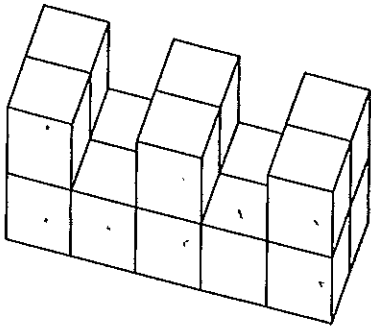
(1)

(b) Find the perimeter of the shaded shape.

.....14..... cm

(2)

Here is a solid prism made of centimetre cubes.



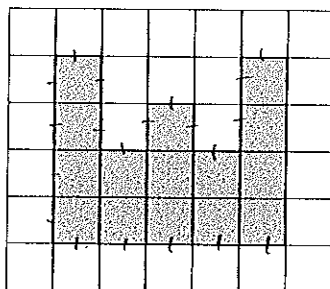
(c) Find the volume of the solid prism.

.....16..... cm^3

(2)

(5 marks)

12. A shaded shape has been drawn on the centimetre grid.



(a) Find the perimeter of the shaded shape.

.....24..... cm

(1)

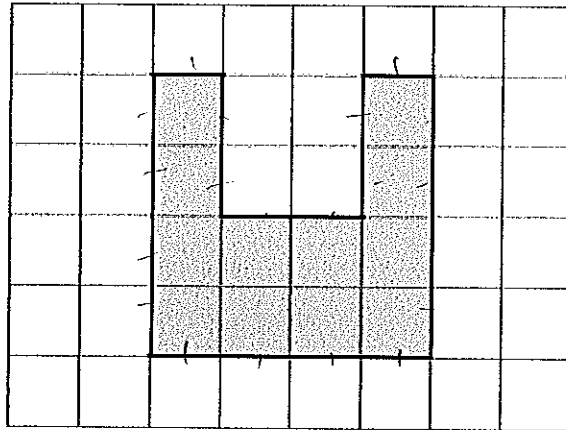
(b) Find the area of the shaded shape.

.....15..... cm^2

(1)

(2 marks)

13. This shaded shape is drawn on a grid of centimetre squares.



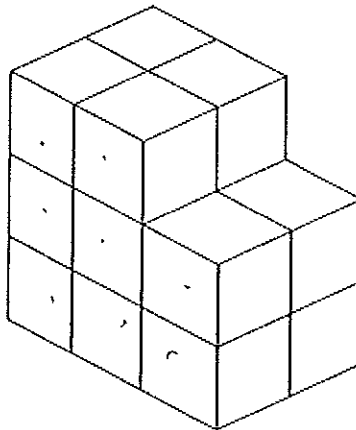
(a) (i) Find the perimeter of the shaded shape.

.....20..... cm

(ii) Find the area of the shaded shape.

.....12..... cm²
(2)

This solid prism is made from centimetre cubes.



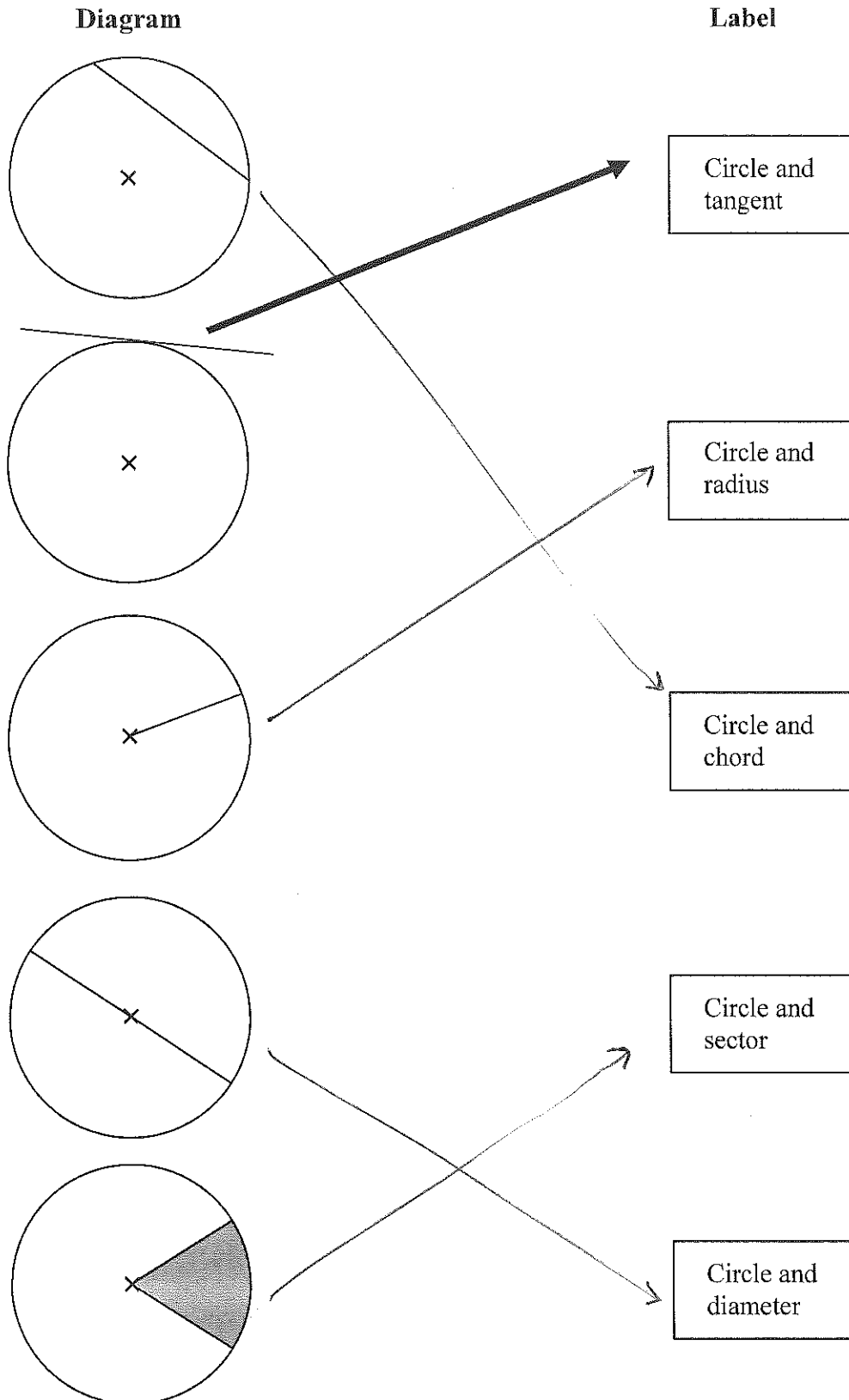
(b) Find the volume of the prism.

.....16..... cm³
(1)

(Total 3 marks)

1. Here are 5 diagrams and 5 labels.
In each diagram the centre of the circle is marked with a cross (×).

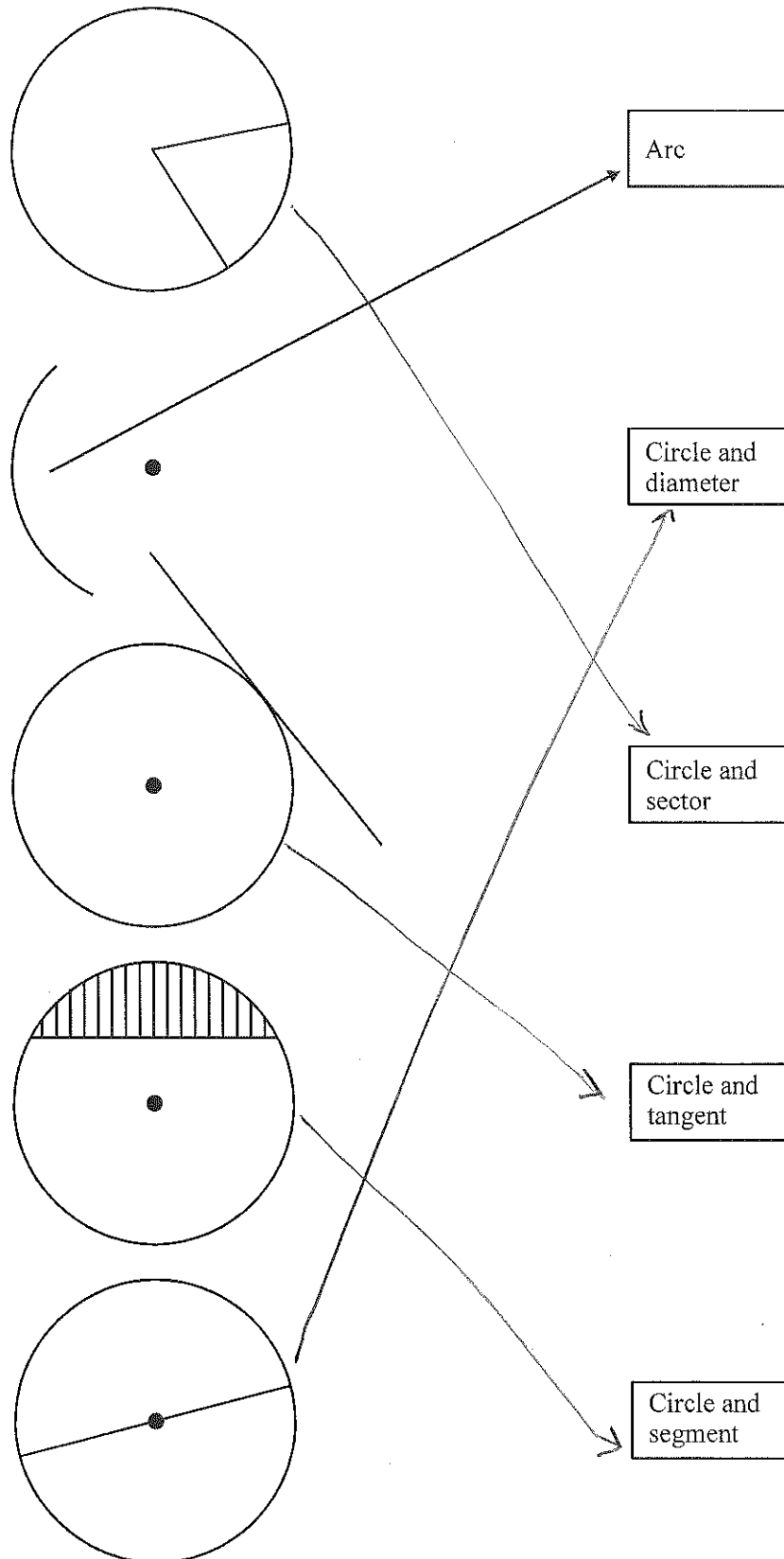
Match each diagram to its label.
One has been done for you.



(3 marks)

2. Here are some diagrams relating to a circle.

Draw an arrow from each of the diagrams to its mathematical name.
The arrow showing an arc is drawn for you.



(3 marks)

3. The radius of a circle is 3.60 m.

Work out the area of the circle.

Give your answer correct to 3 significant figures.

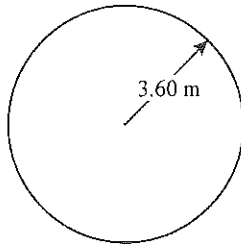


Diagram NOT
accurately drawn

$$\pi \times (3.6)^2$$

$$\dots\dots\dots 40.7 \text{ m}^2 \text{ (3sf)}$$

(3 marks)

4. The diameter of a wheel on Harry's bicycle is 0.65 m.

Calculate the circumference of the wheel.

Give your answer correct to 2 decimal places.

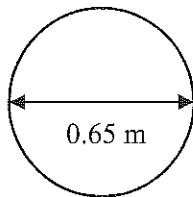


Diagram NOT
accurately drawn

$$\pi \times 0.65$$

$$\dots\dots\dots 2.04 \text{ m (2dp)}$$

(3 marks)

- 5.

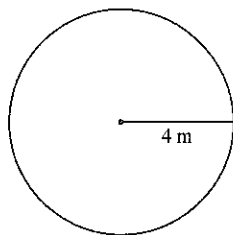


Diagram NOT
accurately drawn

The radius of a circle is 4 m.

Work out the area of the circle.

Give your answer correct to 3 significant figures.

$$\pi \times (4)^2$$

$$\dots\dots\dots 50.3 \text{ m}^2 \text{ (3sf)}$$

(3 marks)



6. A circle has a radius of 6.1 cm.
Work out the circumference of the circle.

Give your answer correct to 3 significant figures.

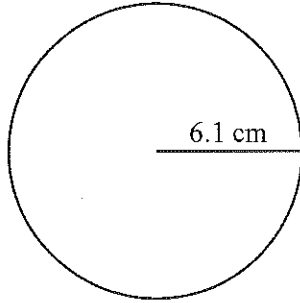


Diagram NOT
accurately drawn

$$2 \times \pi \times 6.1$$

$$\dots\dots\dots 38.3 \text{ cm (3sf)}$$

(3 marks)

7. The radius of a circle is 6.4 cm.
Work out the circumference of this circle.

Give your answer correct to 1 decimal place.

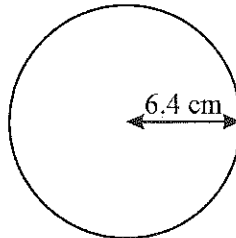


Diagram NOT
accurately drawn

$$2 \times \pi \times 6.4$$

$$\dots\dots\dots 40.2 \text{ cm (1dp)}$$

(3 marks)

8.

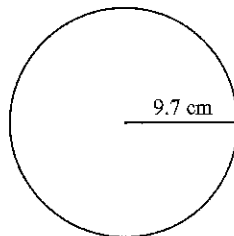


Diagram NOT
accurately drawn

- The radius of the circle is 9.7 cm.
Work out the area of the circle.
Give your answer to 3 significant figures.

$$\pi \times (9.7)^2$$

$$\dots\dots\dots 296 \text{ cm}^2 \text{ (3sf)}$$

(3 marks)



9. The diameter of a circle is 12 centimetres.

- (a) Work out the circumference of the circle.
Give your answer, in centimetres, correct to 1 decimal place.

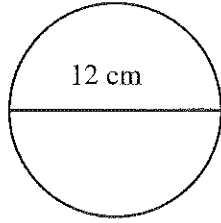


Diagram NOT drawn accurately

$$\pi \times 12$$

$$\dots\dots\dots 37.7 \text{ cm (1dp)}$$

(3 marks)

10. Here is a tile in the shape of a semicircle.

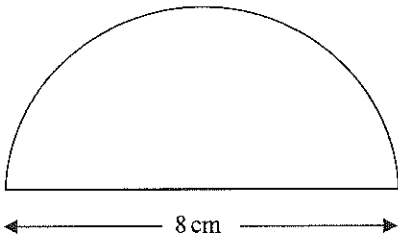


Diagram NOT accurately drawn

The diameter of the semicircle is 8 cm.

Work out the perimeter of the tile.
Give your answer correct to 2 decimal places.

$$\frac{\pi \times 8}{2} + 8$$

$$\dots\dots\dots 20.57 \text{ cm (2dp)}$$

(3 marks)

11.

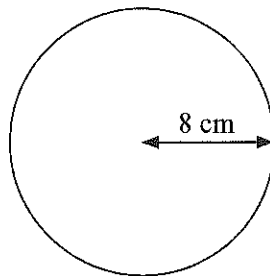


Diagram NOT accurately drawn

$$2 \times \pi \times 8$$

The radius of this circle is 8 cm.

Work out the circumference of the circle.
Give your answer correct to 2 decimal places.

$$\dots\dots\dots 50.27 \text{ cm (2dp)}$$

(3 marks)



12.

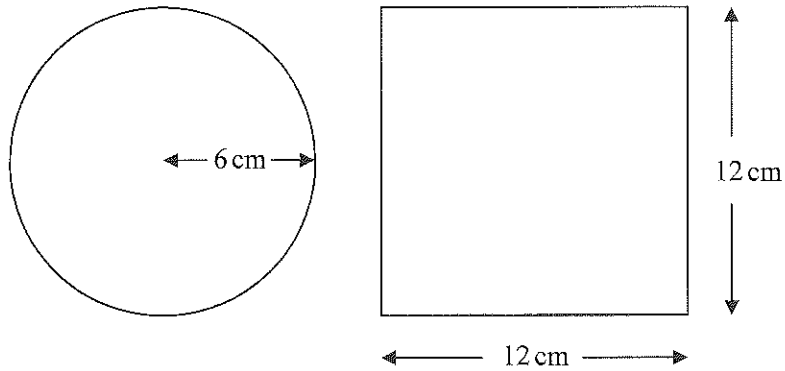


Diagram NOT accurately drawn

A circle has a radius of 6 cm.

A square has a side of length 12 cm.

Work out the difference between the area of the circle and the area of the square.
Give your answer correct to one decimal place.

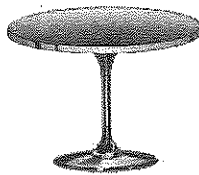
$$\begin{aligned} \text{Circle: } & \pi \times 6^2 \\ & = 113.1 \text{ cm}^2 \\ & \text{(1dp)} \end{aligned}$$

$$\text{Square: } 12 \times 12 = 144 \text{ cm}^2$$

$$30.9 \text{ cm}^2 \text{ (1dp)}$$

(4 marks)

13. The top of a table is a circle.
The radius of the top of the table is 50 cm.



- (a) Work out the area of the top of the table.

$$\pi \times 50^2$$

$$7854.0 \text{ cm}^2 \text{ (1dp)}$$

(2)

The base of the table is a circle.
The diameter of the base of the table is 40 cm.

- (b) Work out the circumference of the base of the table.

$$\pi \times 40$$

$$125.7 \text{ cm} \text{ (1dp)}$$

(2)

(4 marks)

14.

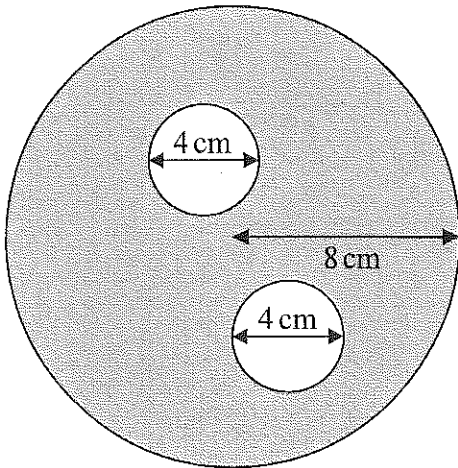


Diagram **NOT** accurately drawn

The diagram shows two small circles inside a large circle.
The large circle has a radius of 8 cm.

Each of the two small circles has a diameter of 4 cm.

(a) Write down the radius of each of the small circles.

..... 2 cm

(1)

(b) Work out the area of the region shown shaded in the diagram.
Give your answer correct to one decimal place.

$$\pi \times 8^2 - 2(\pi \times 2^2)$$

..... 175.9 cm² (1dp)

(4)

(5 marks)



1.

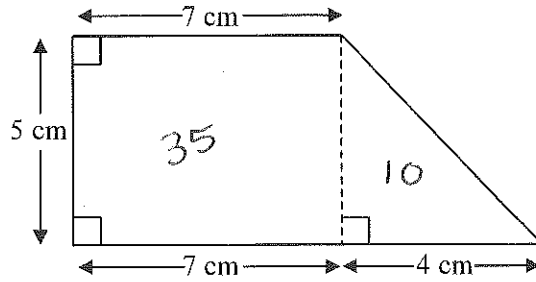


Diagram NOT accurately drawn

Work out the area of the shape.

$$5 \times 7 = 35$$
$$\frac{1}{2} \times 4 \times 5 = 10$$

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

2.

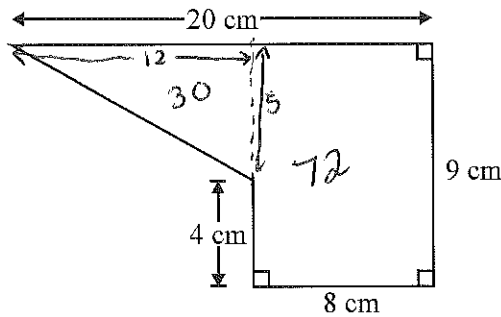


Diagram NOT accurately drawn

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

$$8 \times 9 = 72$$
$$\frac{1}{2} \times 12 \times 5 = 30$$

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

3. Here is a trapezium.

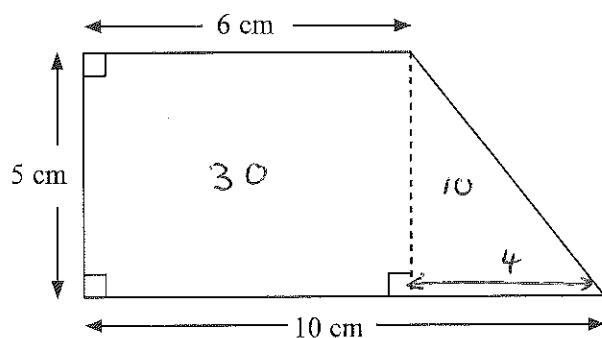


Diagram **NOT** accurately drawn

Work out the area of the trapezium.

$$5 \times 6 = 30$$

$$\frac{1}{2} \times 4 \times 5 = 10$$

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

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

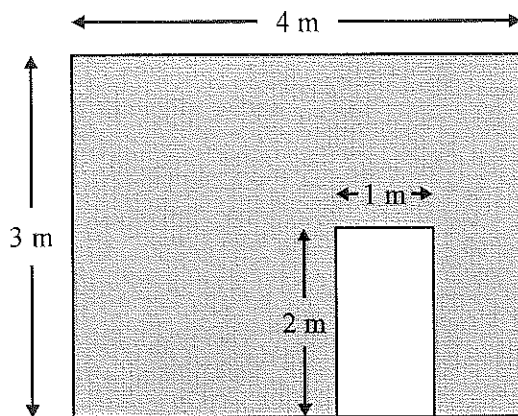


Diagram **NOT** accurately drawn

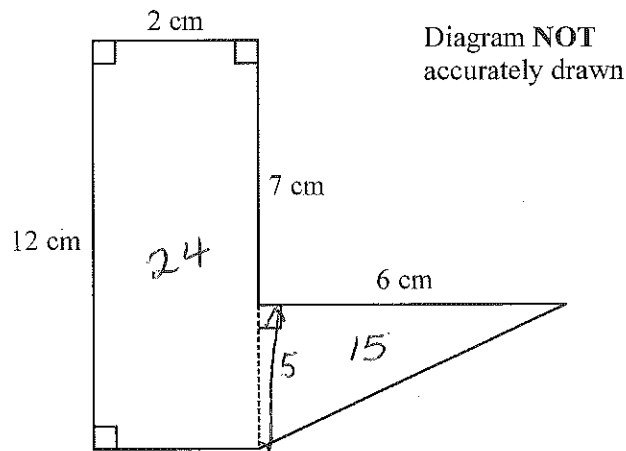
Work out the shaded area.

$$3 \times 4 = 12$$

$$1 \times 2 = 2$$

..... 10 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.

$$2 \times 12 = 24$$
$$\frac{1}{2} \times 6 \times 5 = 15$$

.....39.....cm²
(Total 3 marks)

6.

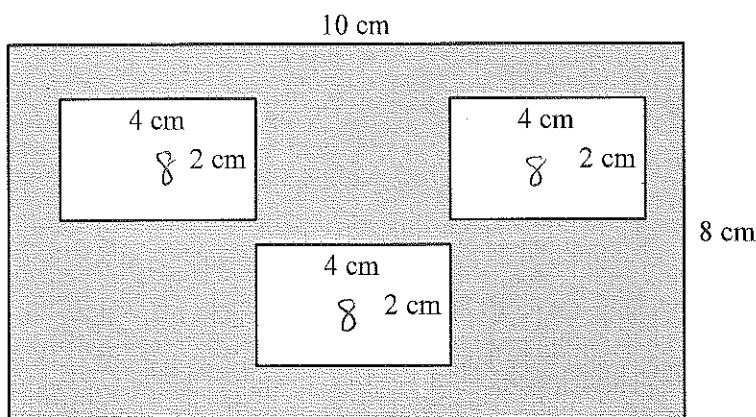


Diagram NOT
accurately drawn

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.

$$10 \times 8 = 80$$

$$4 \times 2 = 8$$

$$80 - (3 \times 8)$$

$$80 - 24 = 56$$

.....56.....cm²
(Total 3 marks)

7.

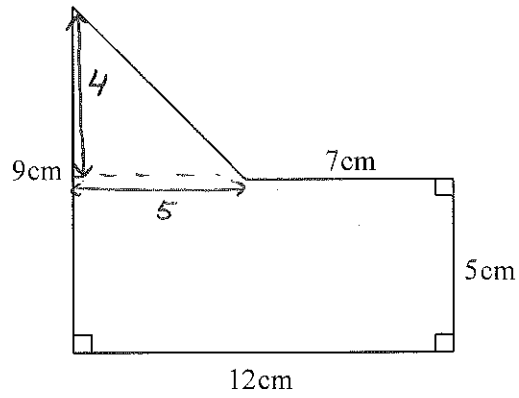


Diagram NOT accurately drawn

Work out the area of the shape.

$$12 \times 5 = 60$$
$$\frac{1}{2} \times 4 \times 5 = 10$$

.....70..... cm²
(Total 4 marks)

8.

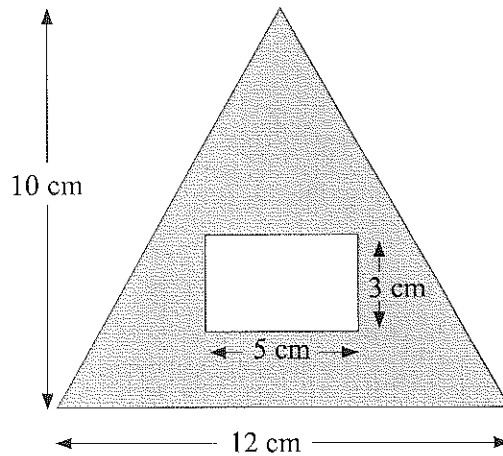


Diagram NOT accurately drawn

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.

$$\frac{1}{2} \times 12 \times 10 = 60$$

$$3 \times 5 = 15$$

$$\dots\dots\dots 45 \text{ cm}^2$$

(Total 3 marks)



9.

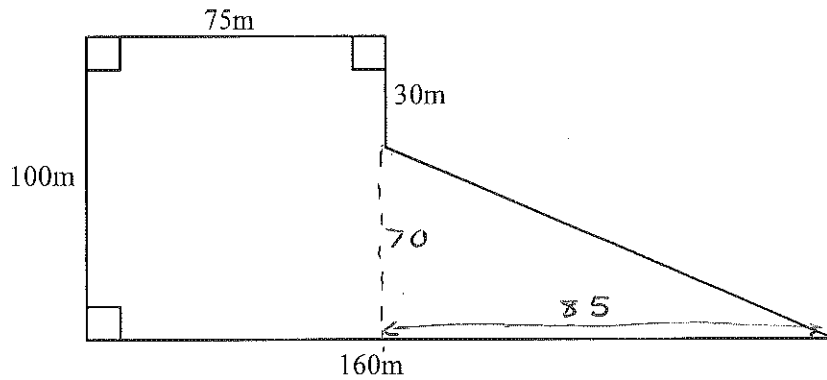


Diagram NOT accurately drawn

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.

$$\begin{array}{r} 75 \times 100 = 7500 \\ \frac{1}{2} \times 70 \times 85 = 2975 \\ \hline 10475 \end{array}$$

$$10475 \times 3$$

£ 31425

(Total 5 marks)