E4.2 2D Shapes: Perimeters & Areas

Question Paper

Level	IGCSE
Subject	Maths (0580)
Exam Board	Cambridge International Examinations (CIE)
Level	Core
Topic	E4. Mensuration (Perimeters, Areas and Volumes)
Sub-Topic	E4.2 2D Shapes: Perimeters & Areas
Booklet	Question Paper

Time Allowed: **41 minutes**

Score: **/34**

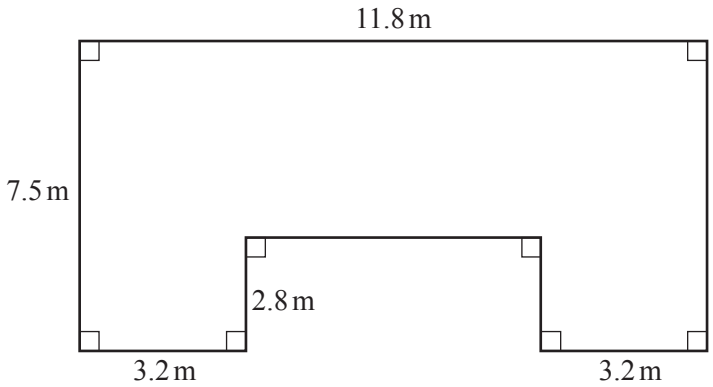
Percentage: **/100**

Grade Boundaries:

A*	A	B	C	D	E	U
>85%	75%	60%	45%	35%	25%	<25%

1 Jared is building a house.

(a)



NOT TO SCALE

The diagram shows the plan of the floor of the house.

(i) Find the area of the floor.

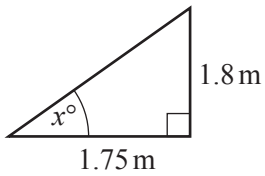
..... m^2 [3]

(ii) For every square metre of floor area, it costs \$2175 to build the house.

Calculate the cost of building the house.
Give your answer correct to 3 significant figures.

\$..... [2]

(b)



NOT TO SCALE

The diagram shows a section of the roof.

Using trigonometry, calculate the value of x.

$x =$ ..... [2]

(c) Jared invests $50 000 for three years at a rate of 2% per year compound interest.

Calculate the total amount Jared receives at the end of the three years.

$..... [3]

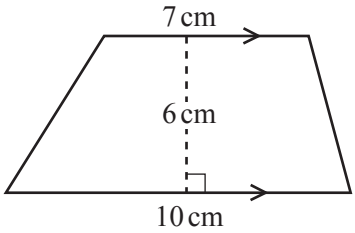
(d) Jared also built an apartment for $180 000.

He sells it for $198 000.

Calculate the percentage profit that he makes.

.....% [3]

2



NOT TO SCALE

(a) Calculate the area of the trapezium.

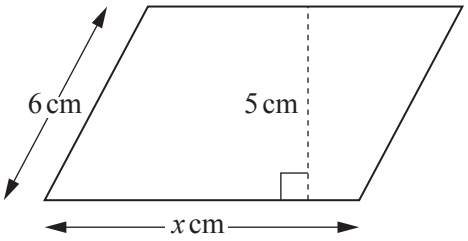
..... cm^2 [2]

(b) The trapezium is the cross section of a prism.
The length of the prism is 12 cm.

Calculate the volume of the prism.
Give the units of your answer.

.... [2]

3



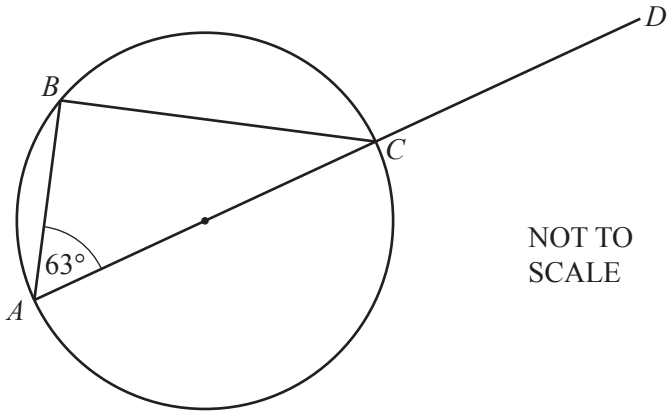
NOT TO SCALE

The area of this parallelogram is 51.5 cm^2.

Work out the value of x.

x = ... [2]

4 **(a)**



NOT TO SCALE

A, *B* and *C* lie on a circle with diameter *AC*.
AC is extended to *D* and angle *BAC* = 63°.

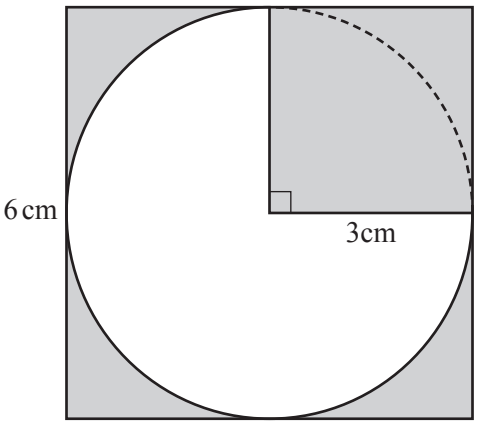
Work out angle *BCD*.
Give reasons to explain your answer.

Answer(a) Angle *BCD* = ... because .....

.....

..... [4]

(b)



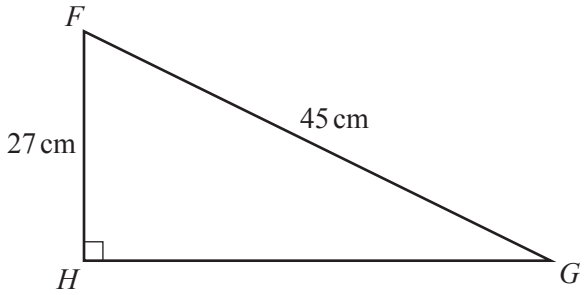
NOT TO SCALE

The diagram shows a circle with radius 3 cm inside a square of side 6 cm.

Calculate the shaded area.

Answer(b) ..... cm^2 [5]

(c)



NOT TO SCALE

FGH is a right-angled triangle.

Calculate

(i) *GH*,

Answer(c)(i) *GH* = ... cm [3]

(ii) the perimeter of the triangle,

Answer(c)(ii) ..... cm [1]

(iii) the area of the triangle.

Answer(c)(iii) ..... cm^2 [2]