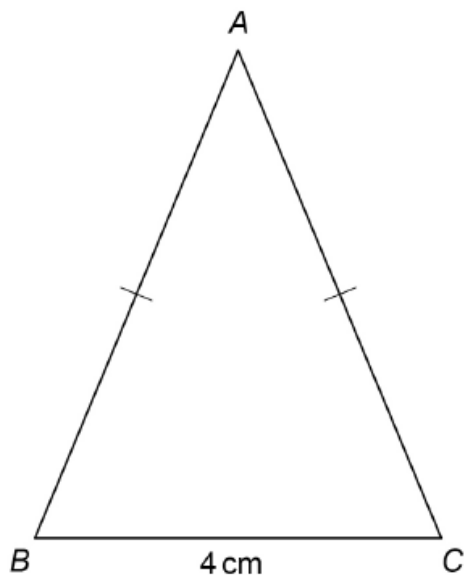


Mensuration and calculations – GCSE Mathematics Paper 1

1. No.4

In this isosceles triangle,

$$AB = AC$$

Not drawn
accurately

The perimeter of the triangle is 22 cm

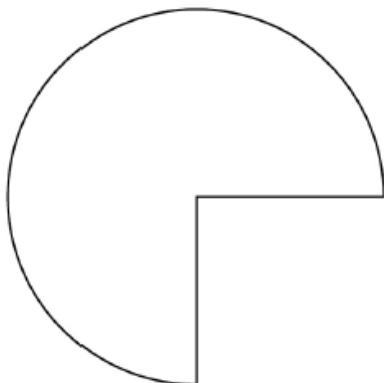
Work out the length of AB .**[3 marks]**

Answer _____ cm

2. No.25

Here are two shapes, P and Q.

P
 $\frac{3}{4}$ of a circle, radius 20 cm



Q
 $\frac{1}{3}$ of a circle, radius 15 cm

Not drawn
accurately

How many times bigger is the area of P than the area of Q?

You **must** show your working.**[4 marks]**

Answer _____

3. No.27

A solid has volume 300 cm^3 and density 2 g/cm^3

Circle the mass of the solid.

[1 mark]

150 g

298 g

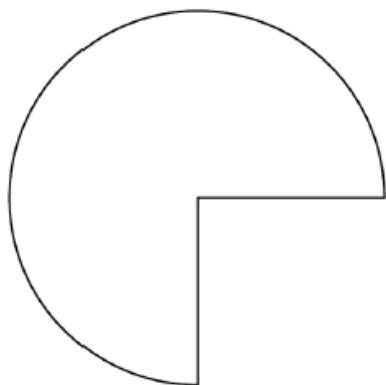
302 g

600 g

4. No.11

Here are two shapes, P and Q.

P
 $\frac{3}{4}$ of a circle, radius 20 cm



Q
 $\frac{1}{3}$ of a circle, radius 15 cm

Not drawn
accurately

How many times bigger is the area of P than the area of Q?

You **must** show your working.**[4 marks]**

Answer _____

5. No.15

The cross section of a prism has n sides.

Circle the expression for the number of faces of the prism.

[1 mark]

n

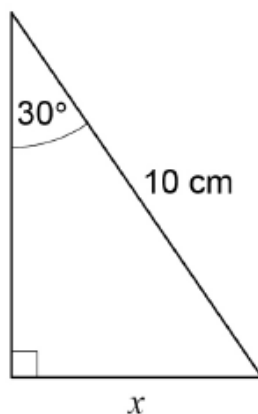
$2n$

$3n$

$n + 2$

6. No.31

Here is a right-angled triangle.



Not drawn
accurately

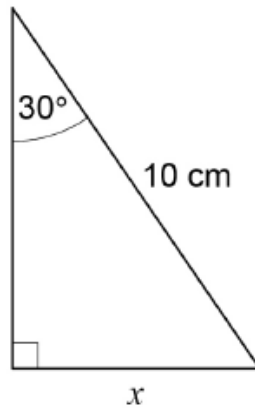
Use trigonometry to work out the value of x .

[3 marks]

Answer _____ cm

7. No.12

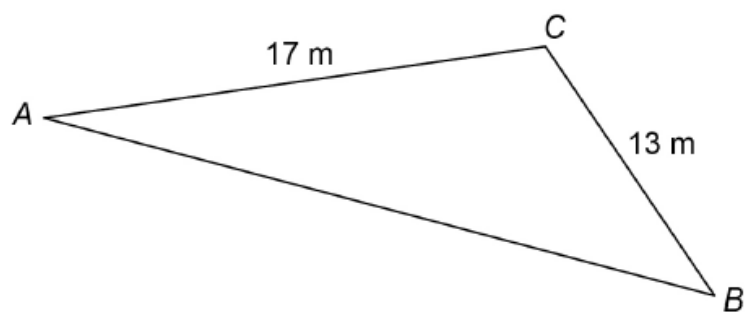
Here is a right-angled triangle.

Not drawn
accuratelyUse trigonometry to work out the value of x .**[3 marks]**

Answer _____ cm

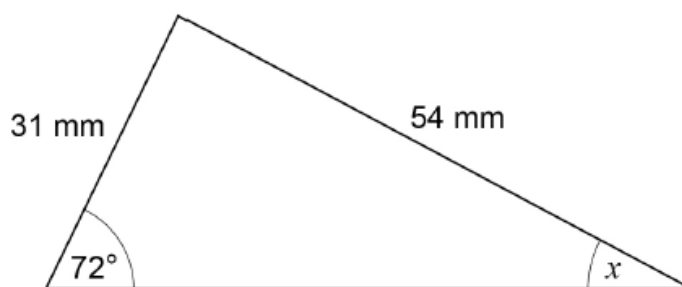
8. No.18

(a) Here is a triangle.

Not drawn
accuratelyGive a reason why the length of side AB cannot be 35 m

[1 mark]

(b) Here is a different triangle.



Not drawn
accurately

Leah tries to use the sine rule to work out the size of angle x .
Here are the first two lines of her working.

$$\frac{x}{\sin 31} = \frac{54}{\sin 72}$$
$$x = \frac{54 \sin 31}{\sin 72}$$

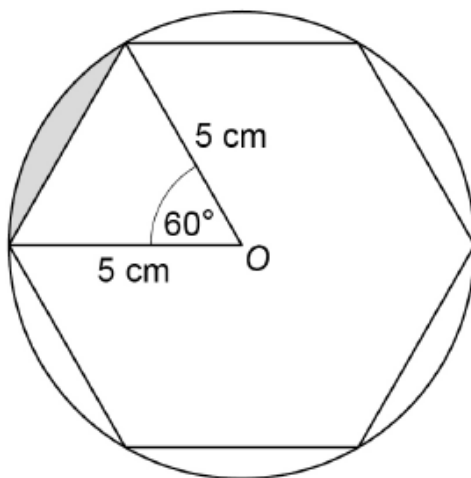
What error has she made in this working?

[1 mark]

9. No.27

The vertices of a regular hexagon lie on a circle with centre O and radius 5 cm

Not drawn
accurately



Work out the shaded area.

Give your answer in the form $\frac{a\pi - b\sqrt{c}}{12}$ where a , b and c are integers.

[illegible]

Answer cm²