

PYTHAGORAS

[ESTIMATED TIME: 45 minutes]

GCSE

(+ IGCSE) EXAM QUESTION PRACTICE

1.

[3 marks]

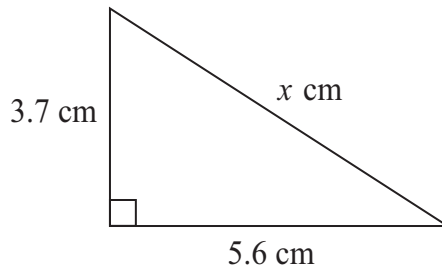


Diagram **NOT**
accurately drawn

Work out the value of x .
Give your answer correct to 3 significant figures.

2.

[3 marks]

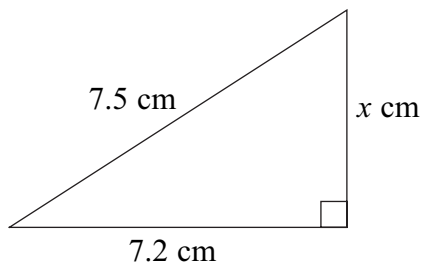


Diagram **NOT**
accurately drawn

Work out the value of x .

$x = \dots\dots\dots$

3.

[3 marks]

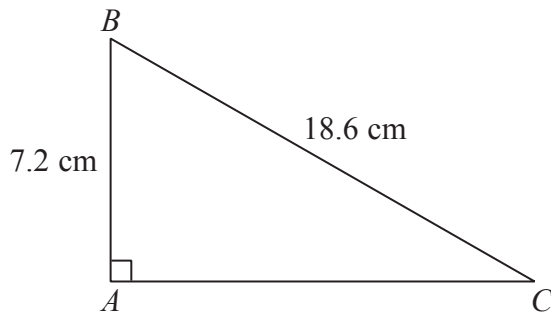


Diagram **NOT**
accurately drawn

Calculate the length of AC .
Give your answer correct to 3 significant figures.

..... cm

4.

[3 marks]

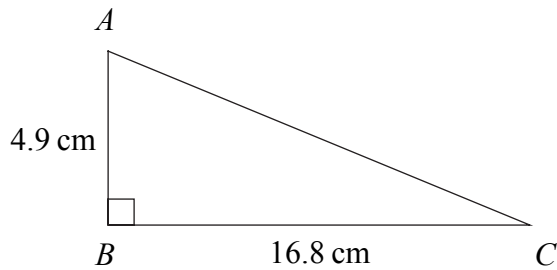


Diagram **NOT**
accurately drawn

ABC is a triangle.
Angle $ABC = 90^\circ$.
 $AB = 4.9\text{ cm}$.
 $BC = 16.8\text{ cm}$.

Calculate the length of AC .

..... cm

5.

[3 marks]

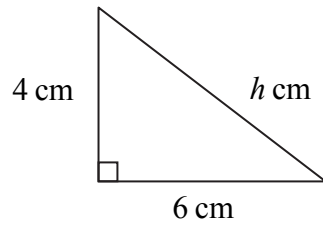


Diagram **NOT**
accurately drawn

Calculate the value of h .
Give your answer correct to 3 significant figures.

$h = \dots\dots\dots$

6.

[3 marks]

Here is a right-angled triangle.

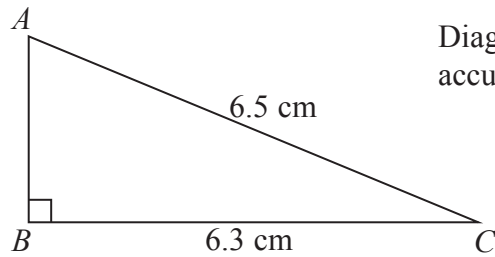


Diagram **NOT**
accurately drawn

$AC = 6.5$ cm.
 $BC = 6.3$ cm.
Angle $ABC = 90^\circ$

Calculate the length of AB .

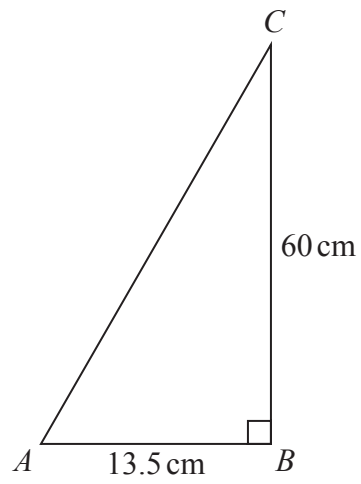


Diagram **NOT**
accurately drawn

Work out the perimeter of the triangle.

..... cm

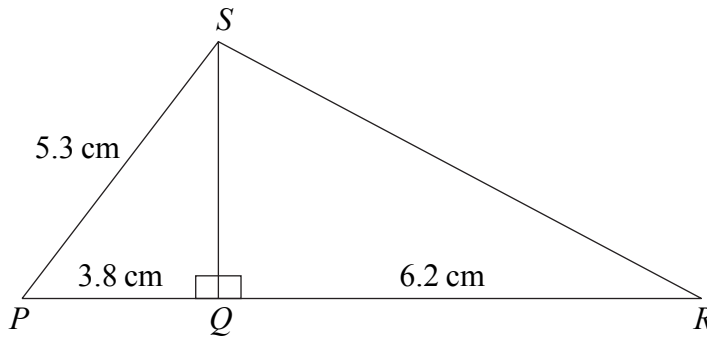


Diagram **NOT**
accurately drawn

Angle $PQS = 90^\circ$.

Angle $RQS = 90^\circ$.

$PS = 5.3$ cm, $PQ = 3.8$ cm, $QR = 6.2$ cm.

Calculate the length of RS .

Give your answer correct to 3 significant figures.

..... cm

Here is the quadrilateral $ABCD$.

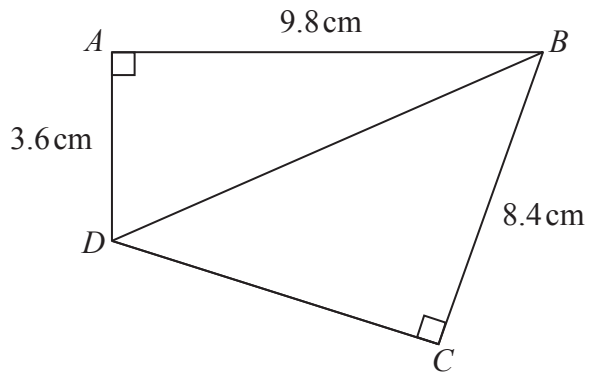


Diagram **NOT**
accurately drawn

Angle $BAD = 90^\circ$ and angle $BCD = 90^\circ$

$AB = 9.8$ cm

$AD = 3.6$ cm

$BC = 8.4$ cm

Calculate the length of DC .

..... cm

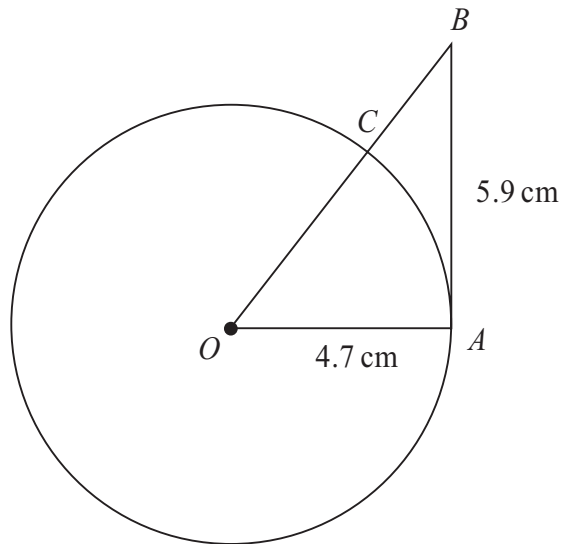


Diagram **NOT**
accurately drawn

A is a point on a circle with centre O and radius 4.7 cm.

AB is the tangent to the circle at A .

$AB = 5.9$ cm.

OB intersects the circle at C .

Calculate the length of BC .

Give your answer correct to 3 significant figures.

..... cm

The diagram shows a circle with centre O and radius 5 cm.

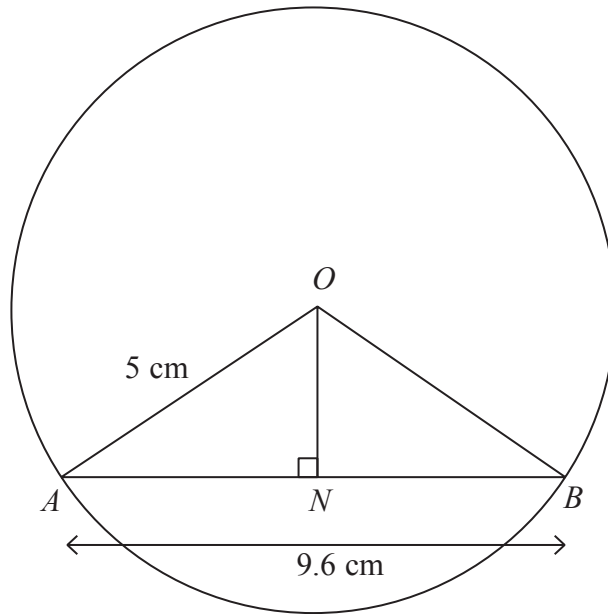


Diagram **NOT**
accurately drawn

ANB is a chord of the circle.

$AB = 9.6$ cm.

Angle $ONA = 90^\circ$.

(a) Write down the length of AN .

..... cm
(1)

(b) Calculate the length of ON .

..... cm
(3)

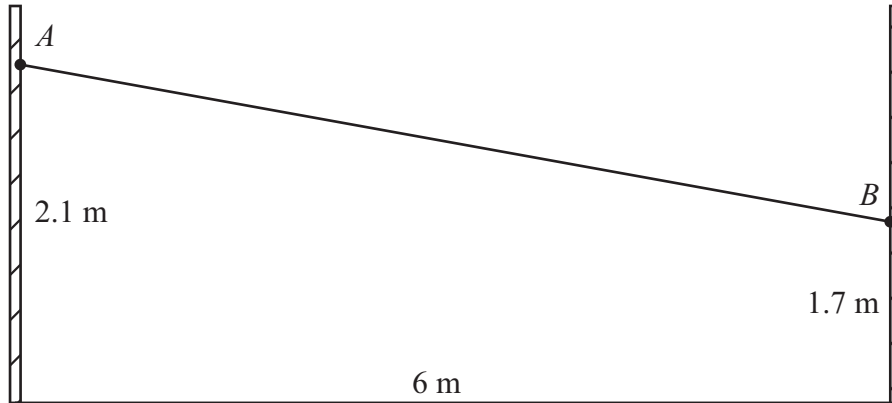
A washing line is attached at points A and B on two vertical posts standing on horizontal ground.

Point A is 2.1 metres above the ground on one post.

Point B is 1.7 metres above the ground on the other post.

The horizontal distance between the two posts is 6 metres.

Diagram **NOT**
accurately drawn



Calculate the distance AB .

Give your answer correct to 3 significant figures.

..... m

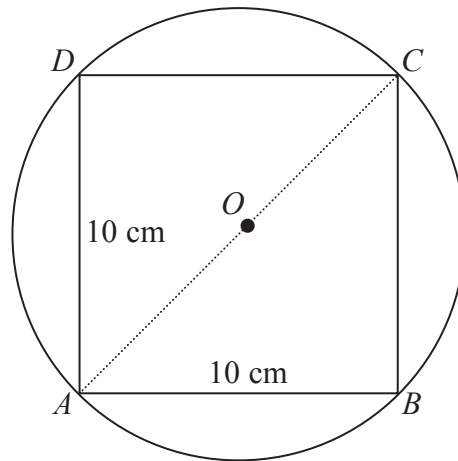


Diagram **NOT**
accurately drawn

The diagram shows a square $ABCD$ drawn inside a circle, centre O .
 A , B , C and D are points on the circle.
The lengths of the sides of the square are 10 cm.
 AC is a diameter of the circle.

Calculate the circumference of the circle.
Give your answer correct to 3 significant figures.

..... cm

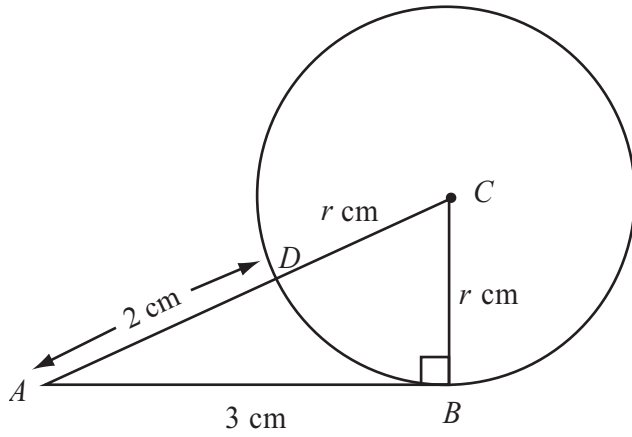


Diagram **NOT**
accurately drawn

B and D are points on a circle, centre C .
 AB is the tangent to the circle at B .
 ADC is a straight line.
 $AB = 3$ cm.
 $AD = 2$ cm.

The radius of the circle is r cm.
Find the value of r .

$r = \dots\dots\dots$