

radius = 2.2
diameter = 4.4

1. A circular pond has a radius of 2.2 m.

- (a) Calculate the circumference of the pond.

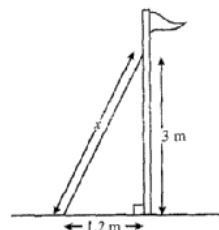
$C = \pi \times \text{diameter}$
Answer $\pi \times 4.4 = 13.8$ m

- (b) Calculate the area of the pond.

$A = \pi \times r^2$
Answer $\pi \times 2.2^2 = 15.2 \text{ m}^2$

2. A support for a flagpole is attached at a height of 3 m and is fixed to the ground at a distance of 1.2 m from the base.

pythagoras
find the
LONG side



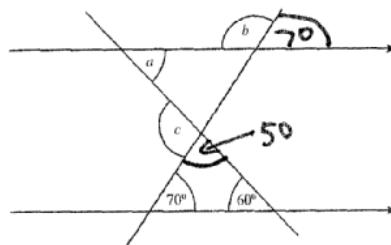
Not to scale

$3^2 + 1.2^2 = x^2$
 $10.44 = x^2$
 $x = \sqrt{10.44}$

Calculate the length of the support (marked x on the diagram).

Answer 3.23 m

- 3.



Not drawn accurately

Work out the values of a, b and c.

alternate

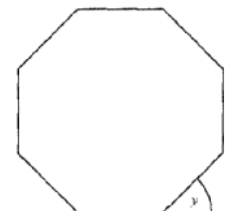
$180 - 50$

Answer a = 60 degrees

b = 130 degrees

c = 130 degrees

4. The diagram shows a regular octagon.



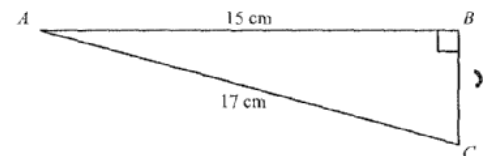
Calculate the size of the exterior angle of the regular octagon, marked y on the diagram.

$360 \div 8 = 45$

Answer 45

(Total 2 marks)

5. ABC is a right-angled triangle.
AB = 15 cm, AC = 17 cm



pythagoras
 \Rightarrow SHORT SIDE

Not drawn accurately

Calculate the length of the side BC.

$17^2 - 15^2 = x^2$
 $x^2 = 64$

$x = \sqrt{64}$

Answer 8 cm