

UNIT 15 *Trigonometry*

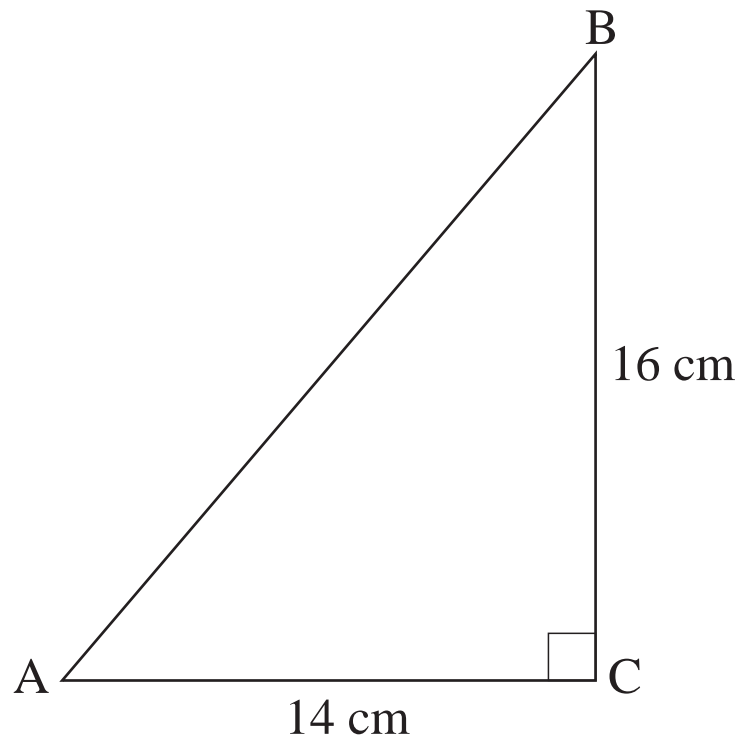
Overhead Slides

Overhead Slides

- 15.1 Pythagoras' Theorem 1
- 15.2 Pythagoras' Theorem 2
- 15.3 Trigonometric Functions
- 15.4 Calculating Sides 1
- 15.5 Calculating Sides 2
- 15.6 Calculating Angles

OS 15.1*Pythagoras' Theorem 1*

Calculate the length of the side AB.



$$AB^2 =$$

$$=$$

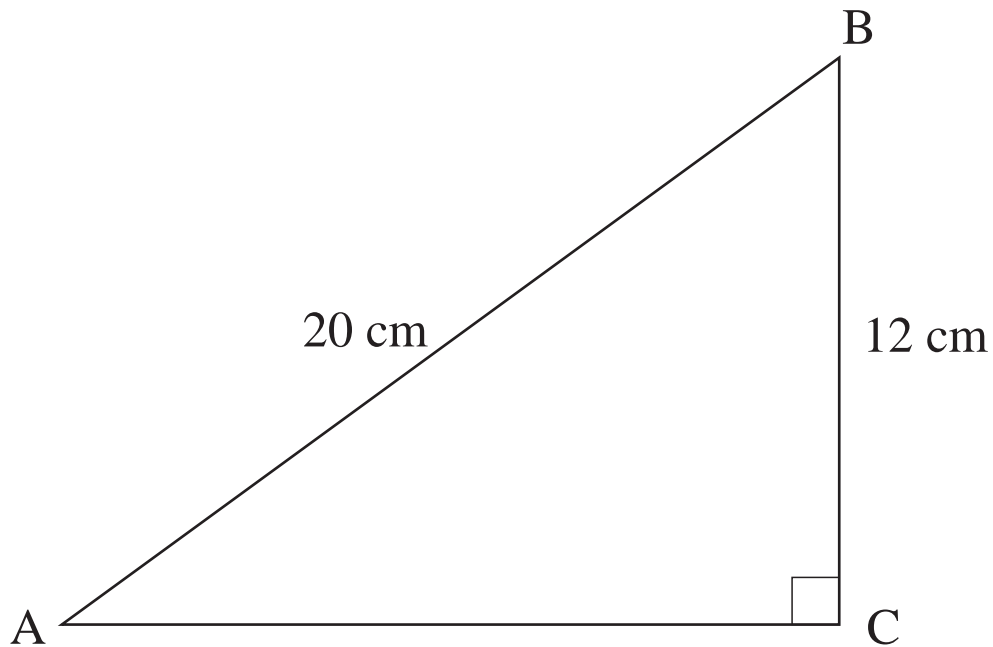
$$AB =$$

$$=$$

OS 15.2

Pythagoras' Theorem 2

Calculate the length of the side AC.



$$AB^2 = AC^2 + BC^2$$

$$AC^2 =$$

$$=$$

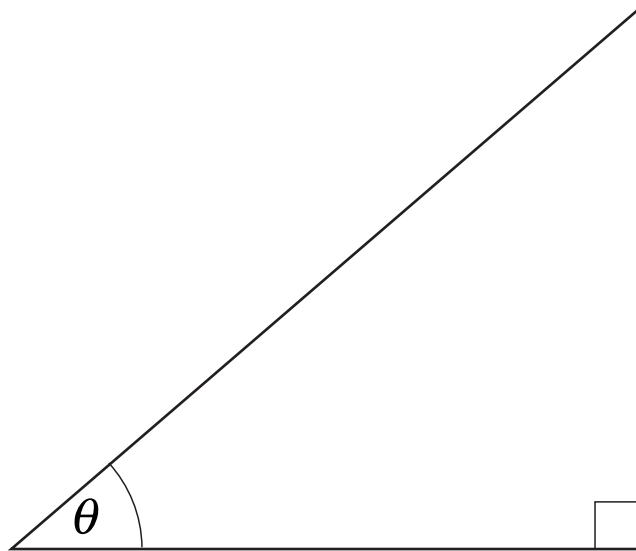
$$AC =$$

$$=$$

OS 15.3

Trigonometric Functions

1. Measure the sides and calculate the values of $\sin\theta$, $\cos\theta$ and $\tan\theta$ for this triangle.



$$\sin\theta = \frac{O}{H} = \text{---} =$$

$$\cos\theta = \frac{A}{H} = \text{---} =$$

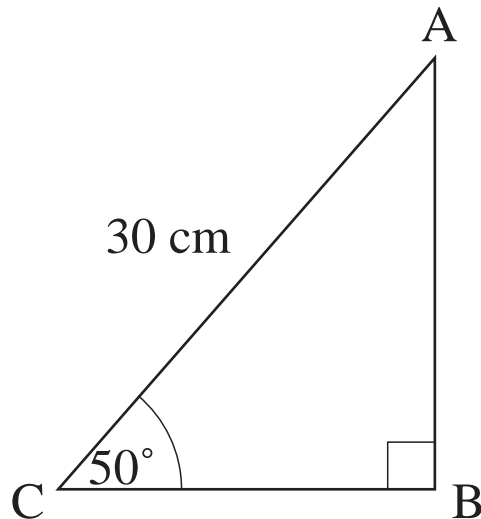
$$\tan\theta = \frac{O}{A} = \text{---} =$$

2. Measure the angle and compare with $\sin\theta$, $\cos\theta$ and $\tan\theta$ from your calculator.

OS 15.4

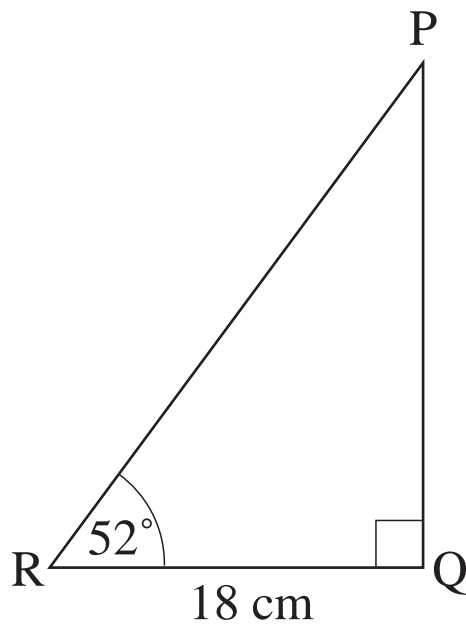
Calculating Sides 1

1. Calculate the length of AB.



$$\sin \theta = \frac{O}{H}$$

2. Calculate the length of PQ.

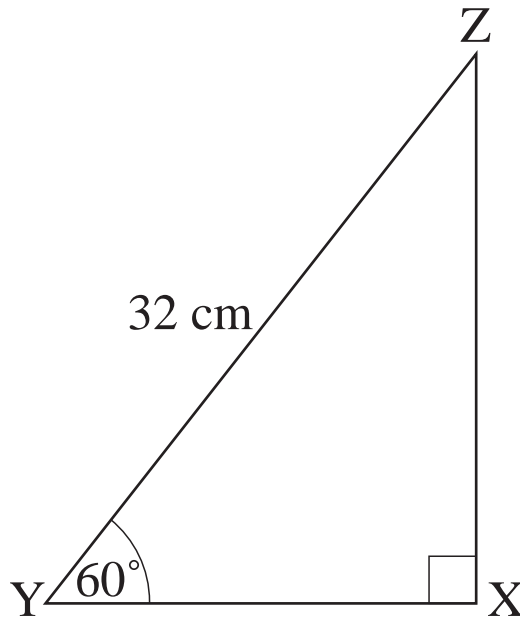


$$\tan \theta = \frac{O}{A}$$

OS 15.5

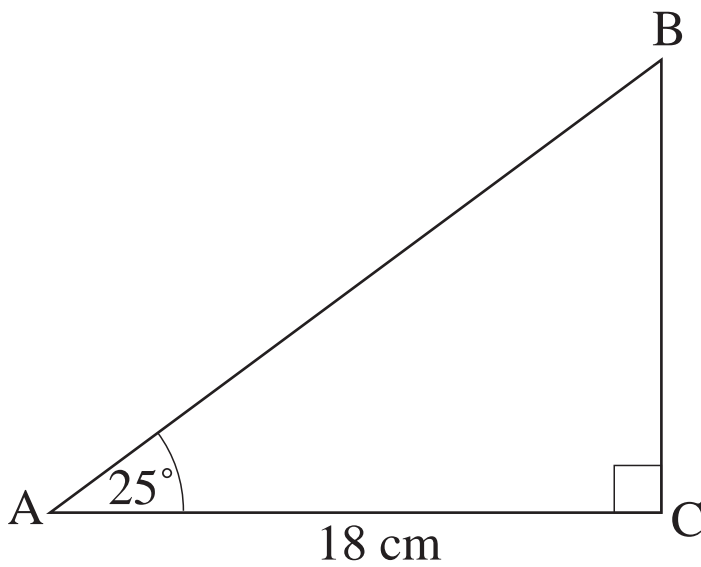
Calculating Sides 2

3. Calculate the length of XY.



$$\cos \theta = \frac{A}{H}$$

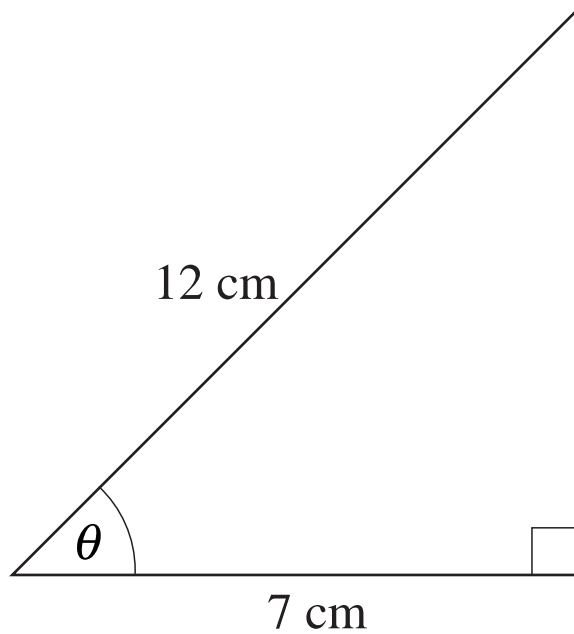
4. Calculate the length of AB.



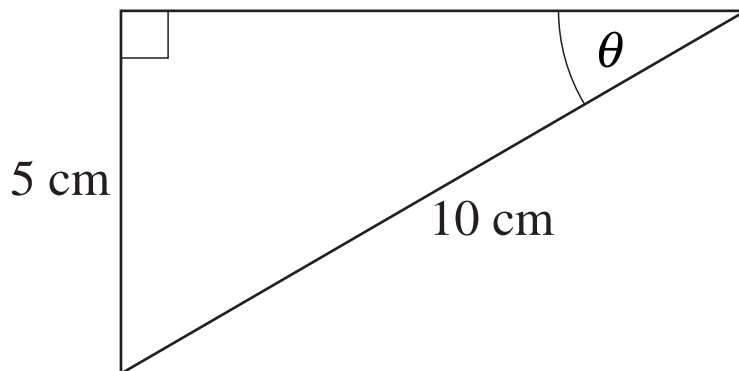
OS 15.6*Calculating Angles*

Calculate the angle θ in each triangle:

1.



2.



3.

