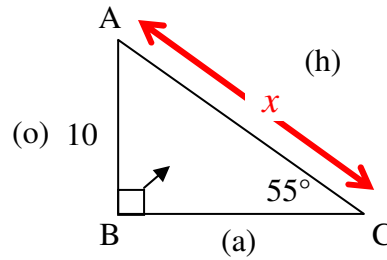


## Calculating the hypotenuse

### Example:

Find  $x$ , the length of AC



✓✓    ✓ ✓  
SOH-CAH-TOA

Mark up the triangle using (o), (a), (h)

Use sine ratio

$$\sin 55^\circ = \frac{10}{x}$$

Note that in this case,  $x$  is in the **denominator**.

To find  $x$ , we need to do **TWO** steps in this case.

i) Multiply both sides by  $x$  to get  $x$  to the top

$$x \cdot \sin 55^\circ = 10$$

ii) Divide both sides by  $\sin 55^\circ$  to be able to calculate  $x$

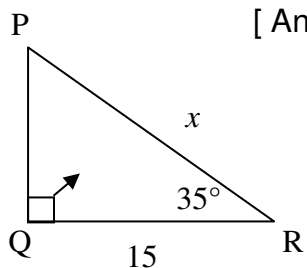
$$x = \frac{10}{\sin 55^\circ}$$

Hence 
$$x = \frac{10}{\sin 55^\circ} = 12.2$$

This techniques is also used with the cosine and tangent ratios.

Calculate  $x$  in each triangle:

1. [ Ans = 18.3 ]



2. [ Ans = 35.3 ]

