Trigonometry

Make sure your calculator is set to degrees for GCSE work. You should see a little D somewhere on your display

Some **O**fficers **H**ave

Curley **A**uburn **H**air

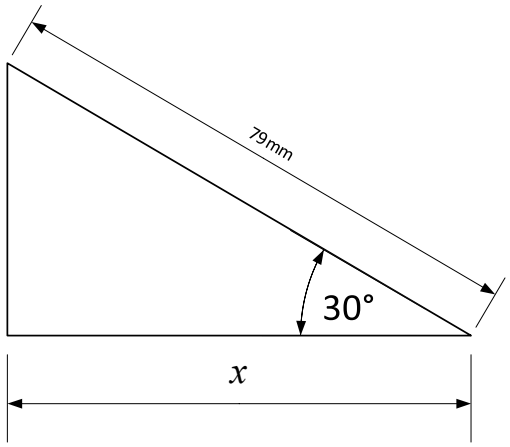
'**T**il **O**ld **A**ge

$$Sin\ \theta = \frac{Opposite}{Hypotenuse}$$

$$Cos\ \theta = \frac{Adjacent}{Hypotenuse}$$

$$Tan\ \theta = \frac{Opposite}{Adjacent}$$

Worked Example to Find Missing Side



$$Cos\ \theta = \frac{Adjacent}{Hypotenuse}$$

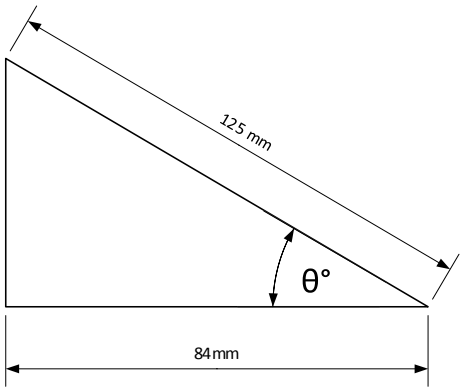
$$Cos\ 30 = \frac{x}{79}$$

$$\therefore x = 79\ Cos\ 30$$

$$= 68.4160069mm$$

$$\approx 68.42\ mm\ (to\ 2\ d.p.)$$

Worked Example to Find Missing Angle



$$Cos\ \theta = \frac{Adjacent}{Hypotenuse}$$

$$Cos\ \theta = \frac{84}{125}$$

$$\therefore \theta = cos^{-1}\left(\frac{84}{125}\right)$$

$$= 47.77838594\ °$$

$$= 47°\ 46'42{,}189"$$

Template to find the missing angle:

$$\_\_\_\ \theta = \frac{\_\_\_}{\_\_\_}$$

$$\frac{\_\_\_\_\_}{\_\_\_\_} = \frac{\_\_}{\_\_}$$

$$\therefore \theta = \_\_\_\_\_$$

$$= \_\_\_\_\_^{\circ}$$

$$= \_\_\_^{\circ}\ \_\_\_'\ \_\_\_\_''$$

Use **SOHCAHTOA** or **Some Officers Have Curley Auburn Hair Til Old Age** to determine whether you need Sin, Cos or Tan

here.

$$\_\_\ \theta = \frac{\_\_}{\_\_}$$

$$\frac{\_\_}{\_\_\_\_\_} = \frac{\_\_}{\_\_}$$

$$\therefore \theta = \_\_\_\_\_$$

$$= \_\_\_\_\_^{\circ}$$

$$= \_\_^{\circ}\ \_\_^{\prime}\ \_\_^{\prime\prime}$$

This will look something like this:

$$Cos^{-1}\left(\frac{78}{125}\right)$$

It could be Tan or Sin though

Template to find the missing side

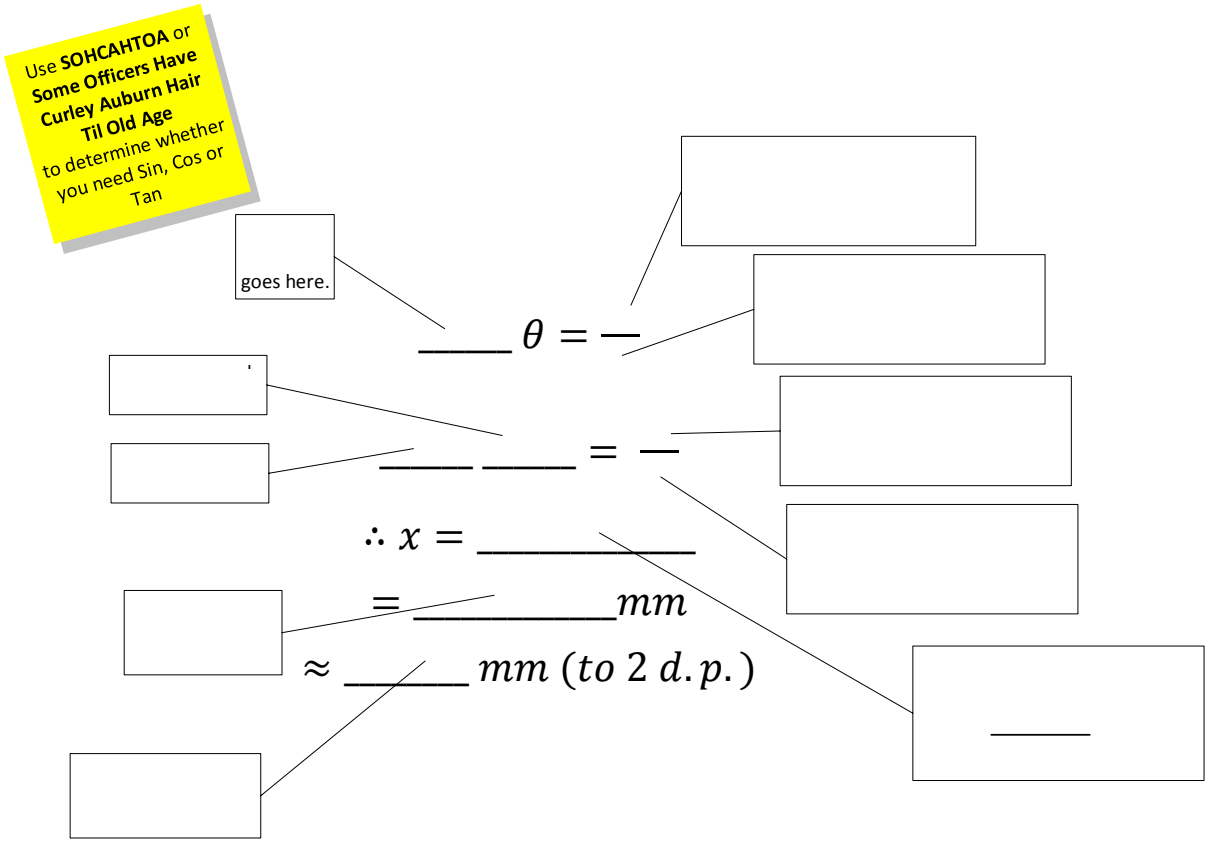
$$\_\_\_\_\_\ \theta = —$$

$$\_\_\_\_\_\ \_\_\_\_\_ = —$$

$$\therefore x = \_\_\_\_\_$$

$$= \_\_\_\_\_ mm$$

$$\approx \_\_\_\_\_\ mm\ (to\ 2\ d.p.)$$


Use **SOHCAHTOA** or **Some Officers Have Curley Auburn Hair Til Old Age** to determine whether you need Sin, Cos or Tan
goes here.
$\_\_\_\_\_\ \theta = \frac{\_\_\_\_}{\_\_\_\_}$
$\_\_\_\_\ \_\_\_\_ = \frac{\_\_\_\_}{\_\_\_\_}$
$\therefore x = \_\_\_\_\_$
$= \_\_\_\_\_ mm$
$\approx \_\_\_\_\ mm\ (to\ 2\ d.p.)$
$\_\_\_\_\_$