Maths – Year 10 Foundation – Unit 4
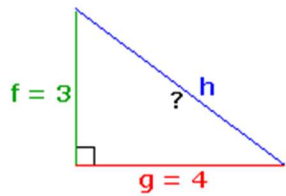
Pythagoras' Theorem
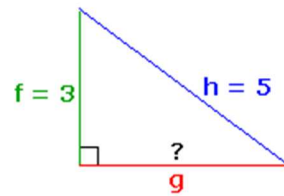

$h^2 = f^2 + g^2$
$h^2 = (3)^2 + (4)^2$
$h^2 = 9 + 16$
$h^2 = 25$
$h = 5$

$h^2 = f^2 + g^2$
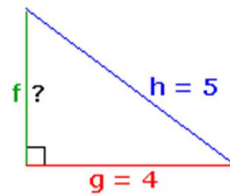$g^2 = h^2 - f^2$
$g^2 = (5)^2 - (3)^2$
$g^2 = 25 - 9$
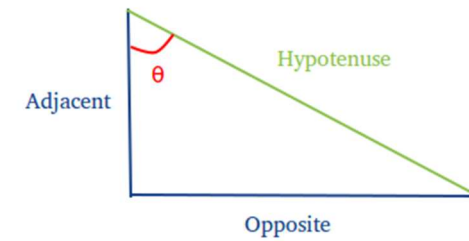$g^2 = 16$
$g = 4$

$h^2 = f^2 + g^2$
$f^2 = h^2 - g^2$
$f^2 = (5)^2 - (4)^2$
$f^2 = 25 - 16$
$f^2 = 9$
$f = 3$

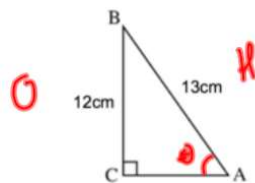## Trigonometry

S   OH   C   AH   T   OA

$\text{Sine}(\theta) = \dfrac{\text{opp}}{\text{hyp}}$ $\text{Cosine}(\theta) = \dfrac{\text{adj}}{\text{hyp}}$ $\text{Tangent}(\theta) = \dfrac{\text{opp}}{\text{adj}}$

Trigonometry – Finding a missing angle

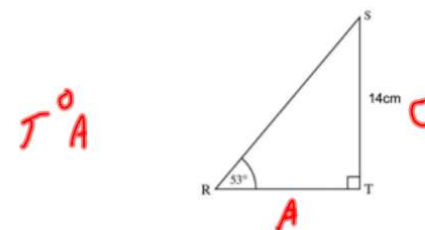Calculate the size of angle BAC.

$\text{Sin}\theta = \dfrac{O}{H}$

$\text{Sin}\theta = \dfrac{12}{13}$

$\text{Sin}^{-1}\dfrac{12}{13} =$

67.38 °

(3)

Trigonometry – Finding a missing side

Find the length of the side RT in the triangle above.

$RT = \dfrac{14}{\tan 53}$

$= 10.549..$

10.55 cm