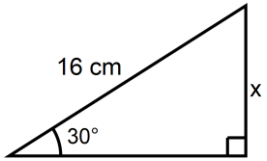
EXACT TRIG VALUES – Non-calculator

Sine

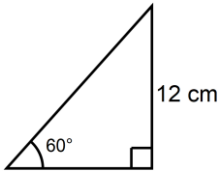
State the value of sine of

0°	30°	45°	60°	90°

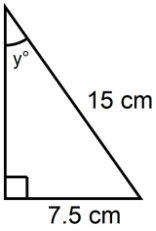
Work out the exact value of x



Work out the exact value of x



Work out the size of angle y

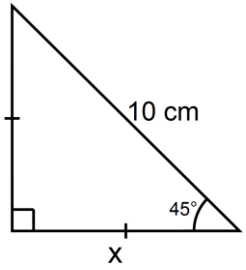


Cosine

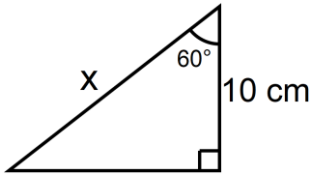
State the value of cosine for

0°	30°	45°	60°	90°

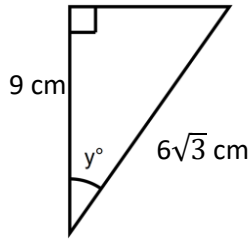
Work out the exact value of x



Work out the exact value of x



Work out the size of angle y

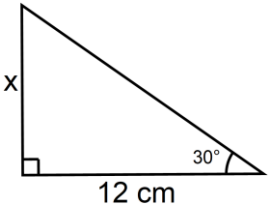


Tangent

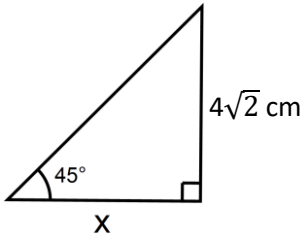
State the value of tan for

0°	30°	45°	60°

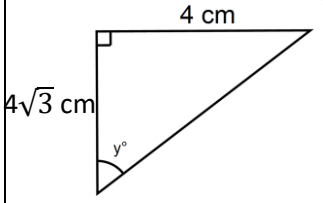
Work out the exact value of x



Work out the exact value of x



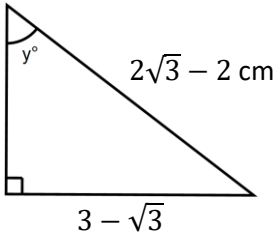
Work out the size of angle y



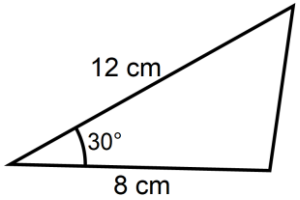
Challenge Questions

Show that
20 cos 30° + 4 sin 60° - 2 tan 60°
can be written in the form $\sqrt{k}$
where k is an integer

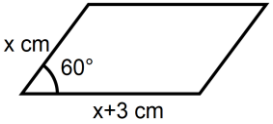
Work out the size of angle y



Work out the area of the triangle



The parallelogram has an area of $20\sqrt{3}$ cm^2. Find the value of x.



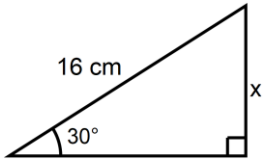
EXACT TRIG VALUES – Non-calculator - ANSWERS

Sine

State the value of sine of

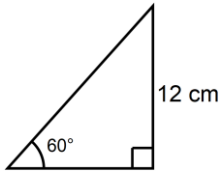
0°	30°	45°	60°	90°
0	$\frac{1}{2}$	$\frac{\sqrt{2}}{2}$	$\frac{\sqrt{3}}{2}$	1

Work out the exact value of x



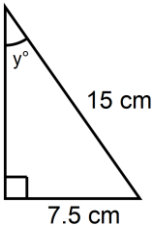
8 cm

Work out the exact value of x



$8\sqrt{3}$ cm

Work out the size of angle y



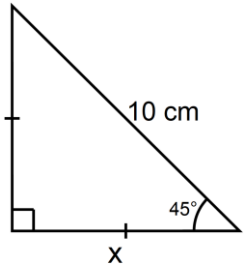
30^o

Cosine

State the value of cosine for

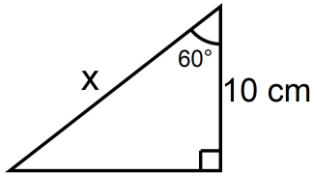
0°	30°	45°	60°	90°
1	$\frac{\sqrt{3}}{2}$	$\frac{\sqrt{2}}{2}$	$\frac{1}{2}$	0

Work out the exact value of x



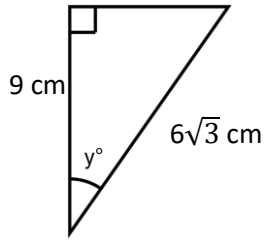
$5\sqrt{2}$ cm

Work out the exact value of x



20 cm

Work out the size of angle y



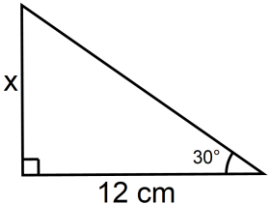
30^o

Tangent

State the value of tan for

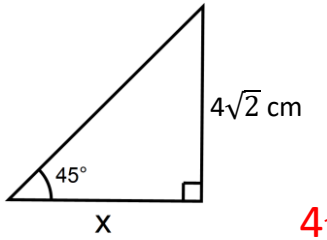
0°	30°	45°	60°
0	$\frac{\sqrt{3}}{3}$	1	$\sqrt{3}$

Work out the exact value of x



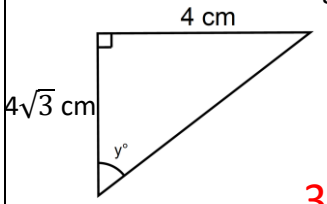
$4\sqrt{3}$ cm

Work out the exact value of x



$4\sqrt{2}$ cm

Work out the size of angle y



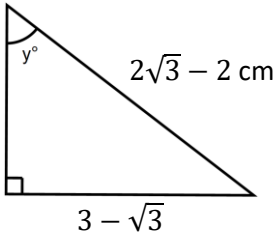
30^o

Challenge Questions

Show that
20 cos 30° + 4 sin 60° - 2 tan 60°
can be written in the form $\sqrt{k}$
where k is an integer

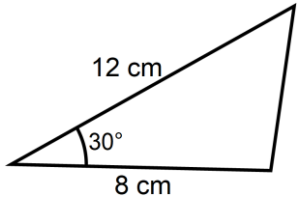
$10\sqrt{3}$

Work out the size of angle y



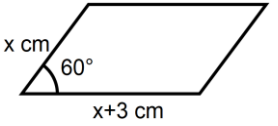
60^o

Work out the area of the triangle



24 cm^2

The parallelogram has an area of $20\sqrt{3}$ cm^2. Find the value of x.



x = 5