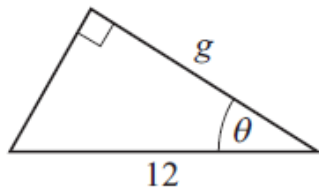




8.1 – Right-angle Trigonometry

Student name: _____ Score: _____

1.



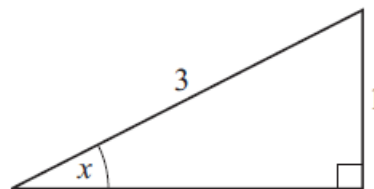
NOT TO SCALE

$\sin \theta = \frac{2}{3}, \quad \cos \theta = \frac{\sqrt{5}}{3}, \quad \tan \theta = \frac{2}{\sqrt{5}}.$

Find the exact value of g.

..... [2]

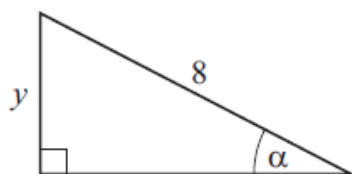
2.



Find the exact value of $\cos x$.

..... [3]

3.



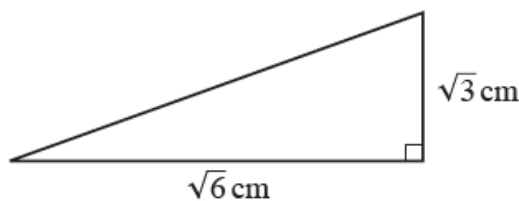
NOT TO SCALE

$\sin \alpha = \frac{3}{5} \quad \cos \alpha = \frac{4}{5} \quad \tan \alpha = \frac{3}{4}$

Find y.

$y =$ [2]

4.



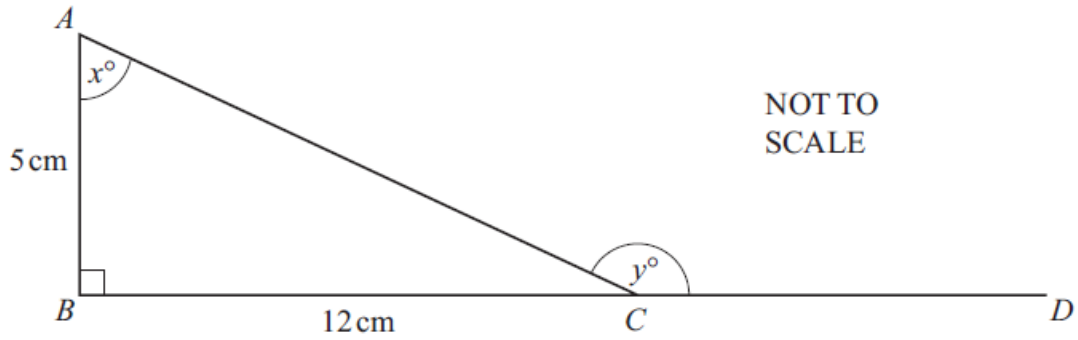
NOT TO SCALE

Find the length of the hypotenuse of the triangle.

..... cm [2]



5.



$AB = 5 \text{ cm}$, $BC = 12 \text{ cm}$ and angle $ABC = 90^\circ$.
 BCD is a straight line.

Find

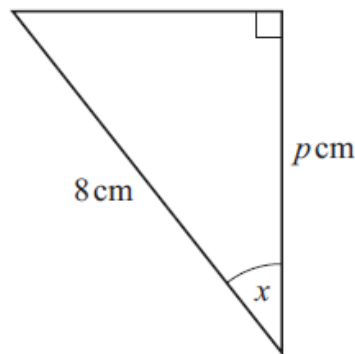
(a) $\tan x^\circ$,

..... [1]

(b) $\cos y^\circ$.

..... [3]

6. (a)



$$\sin x = \frac{1}{3}$$

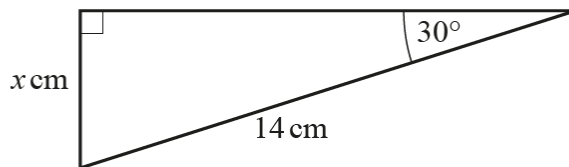
$$\cos x = \frac{2\sqrt{2}}{3}$$

$$\tan x = \frac{1}{2\sqrt{2}}$$

Calculate the value of p giving your answer as a simplified fraction.

$p = \dots\dots\dots$ [2]

7.



NOT TO SCALE

Work out the value of x .

$x = \dots\dots\dots$ [3]



8. The table shows some trigonometric ratios, each correct to 3 decimal places.

	Sine	Cosine	Tangent
40°	0.643	0.766	0.839
70°	0.940	0.342	2.747

Use this information to find

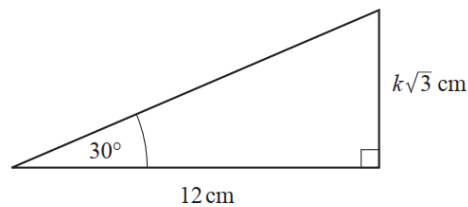
(a) $\sin 110^\circ$,

..... [1]

(b) $\tan 320^\circ$.

..... [1]

9.



NOT TO SCALE

Find the value of k .

$k =$ [3]

10. The lengths of the sides of a triangle are 3 cm, 4 cm and 5 cm.

Find the sine of the smallest angle.

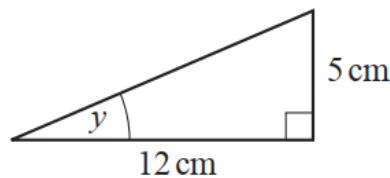
..... [1]

11. The lengths of the sides of a right-angled triangle are 6 cm, $8\sqrt{3}$ cm and 10 cm.

Find the tangent of the smallest angle.

..... [1]

12. Find, as a fraction, the value of $\sin y$.



NOT TO SCALE

$\sin y =$ [3]