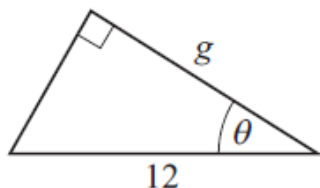




8.1 – Right-angle Trigonometry

Student name: _____ **Answers** _____ Score: _____

1.



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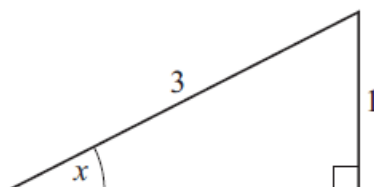
$$\sin \theta = \frac{2}{3}, \quad \cos \theta = \frac{\sqrt{5}}{3}, \quad \tan \theta = \frac{2}{\sqrt{5}}.$$

Find the exact value of g .

$4\sqrt{5}$

..... [2]

2.

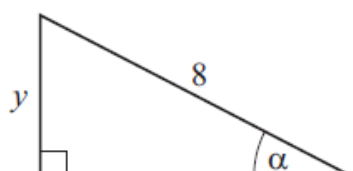


Find the exact value of $\cos x$.

$\frac{2\sqrt{2}}{3}$

..... [3]

3.



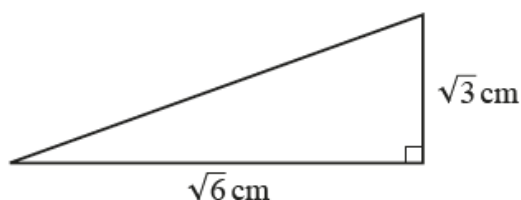
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$$\sin \alpha = \frac{3}{5} \quad \cos \alpha = \frac{4}{5} \quad \tan \alpha = \frac{3}{4}$$

Find y .

$y = 4.8$ [2]

4.

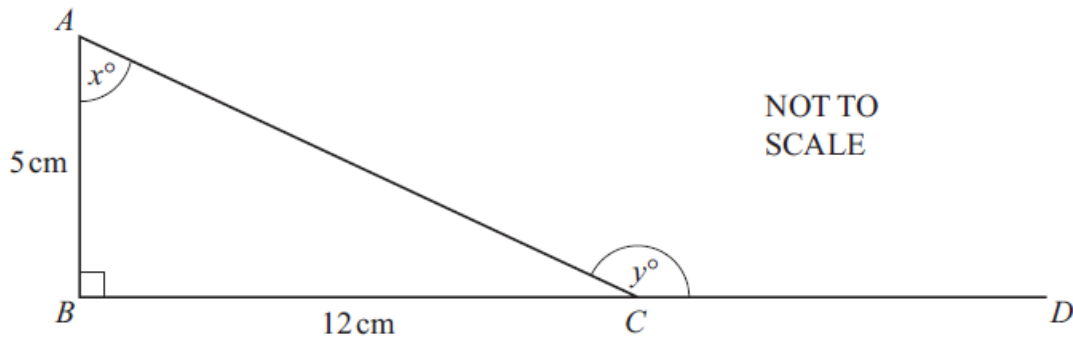


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Find the length of the hypotenuse of the triangle.

3 cm [2]

5.



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

Find

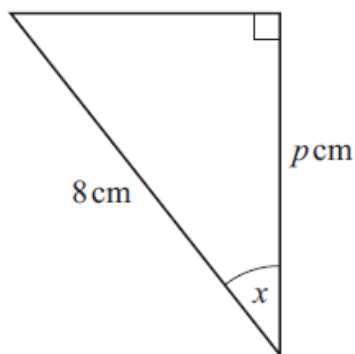
(a) $\tan x^\circ$,

..... 2.4 [1]

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

..... $-\frac{12}{13}$ [3]

6. (a)



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

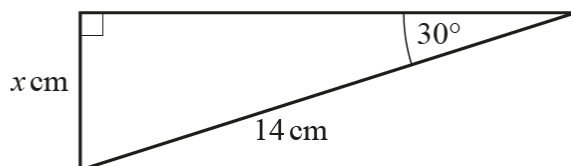
$$\cos x = \frac{2\sqrt{2}}{3}$$

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

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

$p = \frac{16\sqrt{2}}{3}$ [2]

7.



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SCALE

Work out the value of x .

$x = 7$ [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

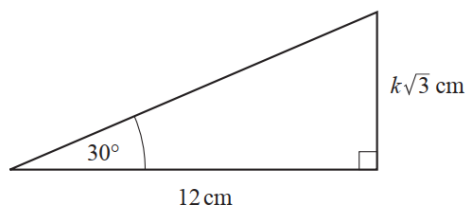
(a) $\sin 110^\circ$,

..... 0.940 [1]

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

..... -0.839 [1]

9.



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Find the value of k .

$k =$ 4 [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.

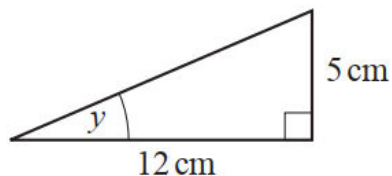
..... $\frac{3}{5}$ [1]

11. The lengths of the sides of a right-angled triangle are 6 cm, 8 cm and 10 cm.

Find the tangent of the smallest angle.

..... 0.75 [1]

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



NOT TO
SCALE

$\sin y =$ $\frac{5}{13}$ [3]