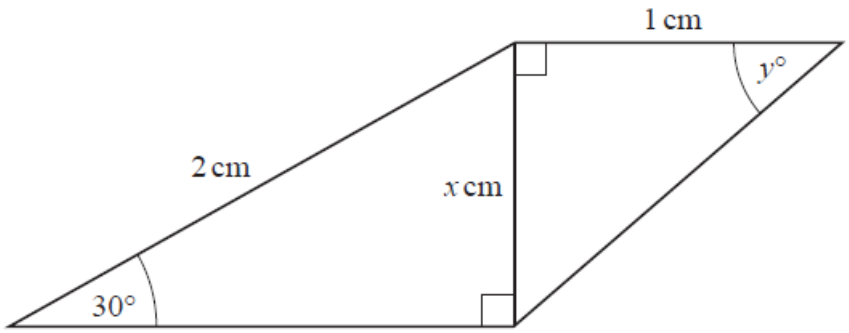
8.2 – Exact values for trigonometric ratios

Student name: _____ Score: _____

1.



NOT TO SCALE

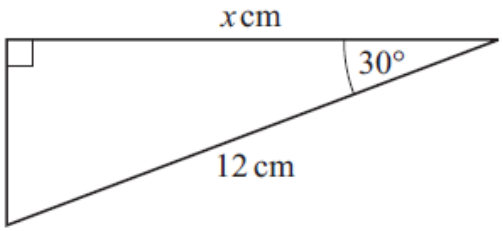
(a) Write down the value of x.

x = ... [1]

(b) Find the value of y.

y = ... [2]

2.



NOT TO SCALE

Find the exact value of x.

x = ... [3]

3. Write the list of numbers in order, starting with the smallest.

$\sin 60°$ $\cos 60°$ $\tan 60°$ $\sqrt{2}$

..... < .....< ..... < ..... [2]

4. x is an **obtuse** angle and $\sin x = \frac{1}{2}$.

Find the exact value of $\cos x$.

..... [2]

5. Solve the equation:

$\sin x = \pm\frac{\sqrt{3}}{2}$ for $0° \leqslant x \leqslant 360°$

x = ... [3]

6. Solve the equation.

$$\cos x = \frac{\sqrt{3}}{2} \quad \text{for} \quad 0° \leqslant x \leqslant 90°$$

$x =$ ..... [1]

7. Solve the equation.

$$\cos x = -\frac{\sqrt{12}}{4} \quad \text{for} \quad -180° \leqslant x \leqslant 180°$$

$x =$ ..... or $x =$ ..... [2]

8. **(a)** Solve.

$$\sin x = \frac{1}{2} \quad \text{for} \quad 0° \leqslant x \leqslant 90°$$

$x =$ ..... [1]

(b) Solve.

$$\sin x = -\frac{1}{2} \quad \text{for} \quad 0° \leqslant x \leqslant 360°$$

$x =$ ..... [2]

9. θ is an acute angle and $\tan\theta = \sqrt{3}$.

Write down the value of θ.

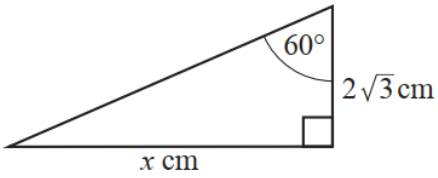
$\theta =$ ..... [1]

10. $\sin\theta = -\frac{1}{\sqrt{2}}$ and $0° \leqslant \theta \leqslant 360°$.

Find the two values of θ.

$\theta =$ ..... or $\theta =$ ..... [2]

11.



NOT TO SCALE

Find the value of x.

$x =$ ..... [3]