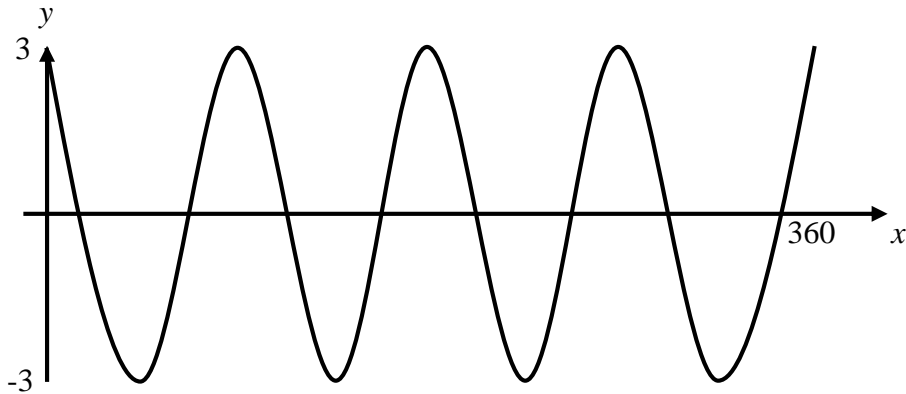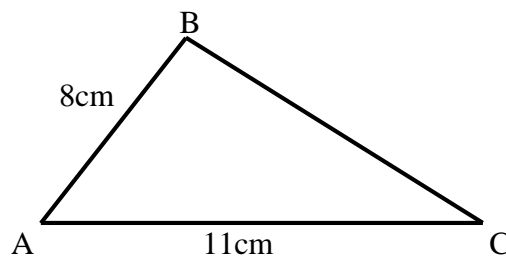1. A function is defined as $g(x) = 3x^{1/2.}$. Work out $g(^1/_4)$.

2. The graph of $y = a\text{Cos}bx$ is shown below. Find the values of a and b.

3. The triangle below has an area of 41cm^2. Find the size of angle BAC.

4. Solve this pair of simultaneous equations.

$$3x - 5y = 20$$
$$2x + 3y = 7$$

5. An antique table is valued at £930. Its value is expected to increase by 2.7% per year. How much will it be worth four years later?

6. Find the roots of the equation $x(x - 3) = 28$.

7. Which pair of lines below are parallel?

$$3x - 2y = 1 \qquad 3x = 4 - 2y \qquad 2y + 3x - 5 = 0 \qquad 2x + 3y + 7 = 0$$

8. State the equation of the axis of symmetry of the equation $x^2 - 6x + 1 = 0$

9. A restaurant bill amounts to £150.12. This includes a service charge of 8%. Work out the cost before the service charge was added.

10. Express as a single fraction in its simplest form.

$$\frac{x+4}{x-2} - \frac{x}{x+1}$$