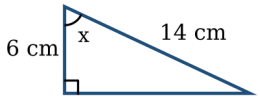
Day 126 **A Tier 10-a-day**

1 Here are the ingredients for 12 muffins.
Sugar: 120 g
Water: 900 ml
Flour: 360 g
(a) Work out how much sugar is needed for 3 muffins.
(b) Hannah has 831 ml of water. What is the greatest number of muffins she can make?

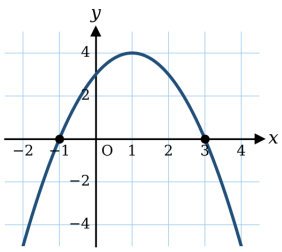
2 Work out the size of angle x. (Calculator)
Give your answer to 1 decimal place.
The diagram is not drawn accurately.

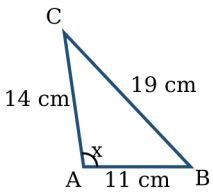


3 An isosceles triangle has two equal sides of length $(3x - 6)$ cm and $(x + 6)$ cm.
The third side is 9 cm.
Work out the perimeter of the triangle.

4 Convert 75000 cm^2 into m^2.

5 The diagram shows the graph of $y = -x^2 + bx + c$.
Find the value of b and the value of c.



Day 126	A Tier 10-a-day
6 Write the recurring decimal $0.\dot{6}4\dot{3}$ as a fraction in its simplest form.	
7 $f(x) = x^3 - 3x^2 + 7x - 4$ Show that the equation $f(x) = 0$ has a solution between $x = 0$ and $x = 1$.	
8 y is inversely proportional to x^2. When $x = 8$, $y = 6$. (a) Find a formula for y in terms of x. (b) Work out the value of y when $x = 2$.	
9 Work out the size of angle x. (Calculator) Give your answer to 1 decimal place. The diagram is not drawn accurately. 	
10 Zara invests £15,000 in a savings account. (Calculator) Compound interest is paid at a fixed rate each year. After 2 years the investment is worth £18,816. Work out the annual rate of interest.	