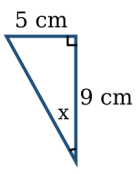
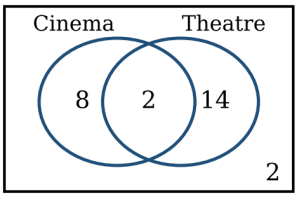
Day 333	A Tier 10-a-day
1 y is directly proportional to the square of x. When x = 10, y = 700. (a) Find a formula for y in terms of x. (b) Work out the value of y when x = 8.	
2 Solve $2(x - 3) = 5(x - 5) + 1$	
3 The size of each angle of a quadrilateral is shown as an expression: $(2x - 15)°$, $(3x + 35)°$, $(x + 10)°$, $(3x + 42)°$ Work out the value of x.	
4 Work out the value of (a) $100^{\frac{3}{2}}$ (b) $(\frac{1}{2})^{-2}$	
5 Work out the size of angle x. (Calculator) Give your answer to 1 decimal place. The diagram is not drawn accurately. 	

Day 333 **A Tier 10-a-day**

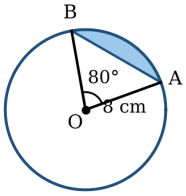
6 The Venn diagram shows information about 26 people.
One person is chosen at random.
(a) Find the probability that the person is in Cinema only.
(b) Find the probability that the person is in neither set.



7 Write as a single fraction

$$\frac{-2}{(x+5)} - \frac{2}{(x+4)}$$

8 The diagram shows a circle with centre O and radius 8 cm.
Angle AOB = 80°. (Calculator)
Work out the area of the shaded segment.
Give your answer to 3 significant figures.



9 A bag contains 4 mint sweets and 3 toffee sweets.
Three sweets are taken at random without replacement.
Work out the probability that exactly one of the three sweets is toffee.

10 A metal block has mass 540 g and volume 179 cm^3. The mass is measured to the nearest 10 grams and the volume to the nearest cm^3. (Calculator)
Work out the upper bound for the density of the metal in g/cm^3.
Give your answer correct to 3 significant figures.