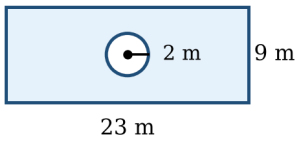
Day 317	B Tier 10-a-day
1 Work out (a) $\frac{8}{9} + \frac{2}{5}$ (b) $\frac{1}{4} - \frac{1}{5}$ Give each answer in its simplest form.	
2 Does the point $(-4, 3)$ lie on the line $y = x + 7$? You must show your working.	
3 The probability that a biased dice lands on a six is 0.8. Work out how many times you would expect this to happen in 200 rolls of the dice.	
4 A rectangle is 4 cm long and 9 cm wide. It is enlarged by scale factor 2. (a) Write down the length and width of the enlarged rectangle. (b) Work out the perimeter of the enlarged rectangle.	
5 Make m the subject of the formula $T = 2m - 5$	

Day 317 **B Tier 10-a-day**

6 The table shows some information about 63 members of a leisure centre.
A person is chosen at random.
Find the probability that the person is in the group "Children" and chose "Swim".

	Swim	Gym	Total
Adults	5		24
Children		24	
Total			63

7 The diagram shows a rectangle 23 m by 9 m with a circle of radius 2 m cut out.
The circle is in the centre of the rectangle.
Work out the area of the shaded region.
Give your answer in terms of π.
The diagram is not drawn accurately.



8 A water tank is $\frac{1}{4}$ full.
180 litres of water are added.
The water tank is now $\frac{7}{10}$ full.
Work out the capacity of the water tank.

9 Two fair 6-sided dice are each rolled once.
Each dice is numbered from 1.
Work out the probability that both dice show a number greater than 2.

10 A window is made from a rectangle and a semicircle. (Calculator)
The rectangle is 10 m wide and 7 m high.
The diameter of the semicircle is 10 m.
(a) Work out the area of the shape.
(b) Work out the perimeter of the shape.
Give each answer correct to 1 decimal place.