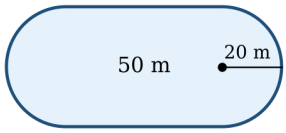
Day 314	S Tier 10-a-day

1 Liam invests £7,500. The rates of interest for the next 3 years are 6%, 6% and 4%. Compound interest is paid. Work out the value of the investment after 3 years.
Give your answer to the nearest penny.
(Calculator)

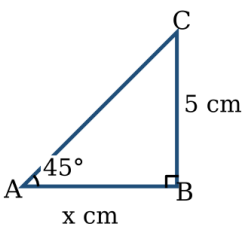
2 Write these numbers in order of size, starting with the smallest.
$\frac{7}{8}$, $\frac{7}{15}$, 83%, 0.8

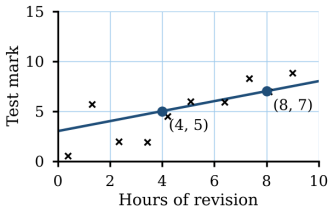
3 The diagram shows a running track made from a rectangle and two semicircles.
(a) Work out the total length of the boundary of the track.
(b) Work out the area enclosed by the track.
Give your answers in terms of π.
The diagram is not drawn accurately.



4 The line L has equation 7x + 24y = 168.
L crosses the x-axis at the point A and the y-axis at the point B.
(a) Find the coordinates of A and B.
(b) Work out the length of AB.

5 ABC is a right-angled triangle.
Work out the exact value of x. Give your answer in its simplest form.
The diagram is not drawn accurately.



Day 314	S Tier 10-a-day
6 The scatter graph shows hours of revision (x) and test mark (y). The equation of the line of best fit is y = 0.5x + 3. (a) Estimate y when x = 7. (b) Explain why an estimate of y when x = 15 may be unreliable.  	
7 Make u the subject of $v = \frac{6u + 3}{2u + 6}$	
8 Solve $\frac{5}{x + 2} - \frac{2}{x + 5} = \frac{3}{4}$	
9 a = 3.84 and b = 82, both correct to 3 significant figures. Work out a ÷ b. Write down your answer to a suitable degree of accuracy. You must show your working and give a reason for your answer. (Calculator)	
10 ABCD is a rectangle with AB = 16 cm and AD = 18 cm. A point P inside the rectangle is such that AP ≤ 12 cm and P is nearer to AB than to AD. Work out the area of the region in which P can lie. Give your answer in terms of π.	