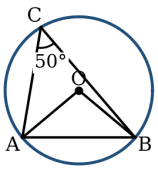
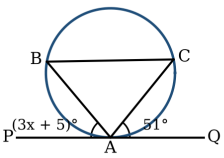
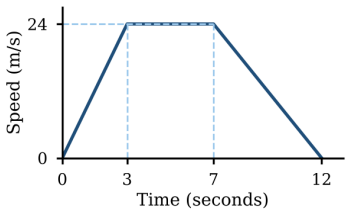
Day 265	S Tier 10-a-day
1 A, B and C are points on a circle, centre O. Angle ACB = 50°. (a) Work out the size of angle AOB. (b) Work out the size of angle OAB. The diagram is not drawn accurately. 	
2 A and B are two events. P(A) = 0.8, P(B) = 0.4 and P(A or B) = 0.88 (a) Work out P(A and B). (b) Are A and B independent? You must show your working.	
3 Factorise fully $27x^2 - 48y^2$	
4 PAQ is a tangent to the circle at A. B and C are points on the circle. Angle PAB = (3x + 5)°, angle ACB = (2x + 20)° and angle CAQ = 51°. (a) Work out the value of x. (b) Work out the size of angle BAC. The diagram is not drawn accurately. 	
5 Oscar changes £1200 into euros at £1 = €1.2. Oscar spends €510 and then changes the rest back into pounds at £1 = €1.5. How many pounds does Oscar get back?	

Day 265	S Tier 10-a-day

6 The line L has equation $12x + 5y = -60$.
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.

7 The graph shows the speed of a train during 12 seconds.
(a) Work out the acceleration during the first 3 seconds.
(b) Work out the average speed over the whole 12 seconds.



8 The HCF of two numbers is 4 and their LCM is 308.
The smaller number is 28.
Work out the larger number.

9 A plane leaves an airport P and travels 112 km on a bearing of 200° to Q. (Calculator)
It then travels 55 km on a bearing of 235° to R.
(a) Work out the distance PR.
(b) Work out the bearing of R from P.
Give distances to 1 decimal place and the bearing to the nearest degree.

10 Show that $\sqrt{70 + 24\sqrt{6}} = 4 + 3\sqrt{6}$