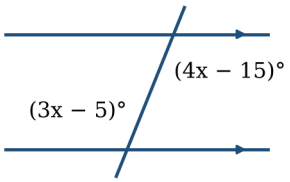
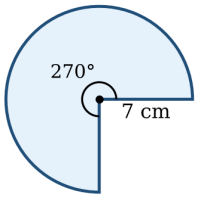
Day 325	A Tier 10-a-day
1 Expand and simplify $(3x - 6)(x - 4) + (x + 3)^2$	
2 Ali buys a bookcase for £40. He sells it for £16. Work out his percentage loss.	
3 The diagram shows two parallel lines crossed by a straight line. (a) Work out the value of x. (b) Work out the size of the angle marked $(4x - 15)°$. The diagram is not drawn accurately. 	
4 Estimate the value of $\sqrt{99.8} \times 3.9$, by rounding 99.8 to the nearest square number and 3.9 to 1 significant figure.	
5 Solve $x^2 + 8x + 5 = 0$ Give your solutions correct to 2 decimal places. (Calculator)	

Day 325	A Tier 10-a-day
6 (a) Change 3 km^2 to m^2. (b) Change 7 litres to cm^3.	
7 The mean mark of 20 boys in a test is 54. The mean mark of 5 girls in the same test is 75. Work out the mean mark of all 25 people.	
8 The diagram shows a sector of a circle of radius 7 cm. Work out the perimeter of the sector. Give your answer in terms of π. The diagram is not drawn accurately. 	
9 The graph of y = f(x) has a maximum point at (0, 4). Write down the coordinates of the turning point of the graph of (a) y = 2f(x) (b) y = f(x) + 1	
10 Jug A contains 39 litres of a mixture of concentrate and water in the ratio 7 : 6. Jug B contains 3 litres of a mixture of concentrate and water in the ratio 2 : 1. The contents of both jugs are mixed together. Work out the ratio of concentrate to water in the mixture. Give your answer in its simplest form.	