Day 68	B Tier 10-a-day
1 ABCD is a parallelogram. Angle DAB = 44°. (a) Write down the size of angle BCD. (b) Work out the size of angle ABC.	
2 The probability that a biased coin lands on heads is 20%. Work out how many times you would expect this to happen in 240 throws of the coin.	
3 Simplify fully (a) $10x^2 \div 5x$ (b) $16cd \div 4c$	
4 A train ticket costs £400. The price goes up by 30%. (a) Work out the new price. (b) A car is worth £1200. Its value goes down by 30% in a year. Work out its new value.	
5 A tin of beans has radius 3 m and height 11 m. (Calculator) Work out its volume. Give your answer correct to 1 decimal place.	

Day 68	B Tier 10-a-day
6 P is directly proportional to n. When n = 2, P = 1. Find a formula for P in terms of n.	
7 Priya's rent goes up by 25%. (Calculator) The new rent is £375 a month. Work out the rent before the increase.	
8 Sam stands 50 m from the base of a lighthouse on level ground. (Calculator) The angle of elevation of the top of the lighthouse is 48°. Work out the height of the lighthouse. Give your answer correct to 1 decimal place.	
9 A cafe sells cakes and drinks. All cakes cost the same and all drinks cost the same. 1 cake and 3 drinks cost £6. 4 cakes and 3 drinks cost £15. Work out the cost of one cake and the cost of one drink.	
10 A rectangle has length (x + 4) cm and width (x − 2) cm. The area of the rectangle is 40 cm^2. (a) Show that $x^2 + 2x - 48 = 0$ (b) Hence work out the length of the rectangle.	