Day 11	B Tier 10-a-day
1 The temperature in a freezer is −9°C. (a) The temperature rises by 3°C. Work out the new temperature. (b) The highest temperature one day was 5°C and the lowest was −8°C. Work out the difference.	
2 A tap fills a tank at a rate of 8 litres per minute. The tank holds 40 litres. How long does it take to fill the empty tank?	
3 A rectangular lawn measures 23 m by 6 m. A rectangle measuring 11 m by 3 m is cut out. Work out the area that is left.	
4 A straight line has equation $y = -3x + 6$ (a) Write down the coordinates of the point where the line crosses the y-axis. (b) Work out the coordinates of the point where the line crosses the x-axis.	
5 Two fair dice, numbered 1 to 6 and 1 to 10, are rolled. Work out the probability that the difference between the two scores is 1.	

Day 11	B Tier 10-a-day
6 $A = 2^3 \times 5^2$ $B = 2 \times 3 \times 5^2 \times 7$ Write down, as a product of prime factors, (a) the HCF of A and B (b) the LCM of A and B	
7 Solve $x^2 - 64 = 0$	
8 There are 2.8×10^3 bacteria in a dish. The number doubles every day. How many are there after 6 days? Give your answer in standard form.	
9 In triangle XYZ, XY = 10 m, YZ = 7 m and angle XYZ = 40°. (Calculator) Work out the area of the triangle. Give your answer correct to 1 decimal place.	
10 Here is an iteration formula. $x_{n+1} = \sqrt{4x_n + 13}$ $x_0 = 3$ (a) Work out x_1 (b) Work out x_2. Give your answer correct to 3 decimal places. (Calculator)	