Day 324	B Tier 10-a-day
1 Triangle XYZ is isosceles with XY = XZ. Angle XYZ = 40°. Work out the size of angle YXZ.	
2 Write 294 as a product of its prime factors. Give your answer in index form.	
3 Here are the first four terms of a sequence. 2, 7, 17, 32 (a) Write down the next two terms. (b) Describe the rule for continuing the sequence.	
4 Here are the number of customers at a shop each day. 10, 31, 29, 21, 13 (a) Find the median. (b) Work out the range.	
5 (a) Write $\frac{7}{16}$ as a decimal. (b) Write $\frac{11}{15}$ as a recurring decimal. For part (b), write down the first 8 decimal places and say which digits repeat.	

Day 324	B Tier 10-a-day
6 P is directly proportional to n. When n = 8, P = 32. Find the value of P when n = 7.	
7 A is the point (−2, 4) and B is the point (−18, 16). (a) Work out the coordinates of the midpoint of AB. (b) Work out the length of AB.	
8 A water tank is $\frac{2}{5}$ full. 143 litres of water are added. The water tank is now $\frac{5}{6}$ full. Work out the capacity of the water tank.	
9 In a test, the mean mark of 20 boys is 54. The mean mark of 5 girls is 69. Work out the mean mark of all 25 students.	
10 Expand and simplify 5(x + 2) + 3(x + 1)	