Day 61	B Tier 10-a-day
1 An isosceles triangle has two equal sides of length (2x + 2) m and a third side of length (3x + 2) m. The perimeter of the triangle is 76 m. Work out the value of x.	
2 Here are four digit cards. 4 2 9 1 Use all four cards to make the largest possible number. Work out the difference between the largest and smallest possible numbers.	
3 A club has 7 members. They choose a captain and a vice-captain from the members. The two jobs must be done by different people. How many different ways can the jobs be given out?	
4 Work out the value of this expression. (Calculator) $\frac{6.2}{4.7} + \frac{5.5}{7}$ Give your answer correct to 3 significant figures.	
5 Triangle PQR has two sides of 4 mm and 12 mm with an angle of 60° between them. Triangle XYZ has two sides of 12 mm and 4 mm with an angle of 60° between them. Are the two triangles congruent? Give a reason for your answer.	

Day 61	B Tier 10-a-day
6 Factorise $16x^2 - 121$	
7 20 deer in a lake are caught, tagged and returned to the lake. Later, a sample of 60 deer is caught and 4 of them are tagged. Estimate the total number of deer in the lake.	
8 A church spire is 31 m tall. (Calculator) Mia stands 58 m from the base of the church spire on level ground. Work out the angle of elevation of the top of the church spire from Mia. Give your answer correct to 1 decimal place.	
9 Line L has equation $y = -x + 4$ Line M is parallel to line L and passes through the point (3, 1). Find the equation of line M.	
10 The cumulative frequency graph shows the times taken by 40 students to complete a puzzle. (a) Use the graph to estimate the median. (b) Work out an estimate for the interquartile range. 	