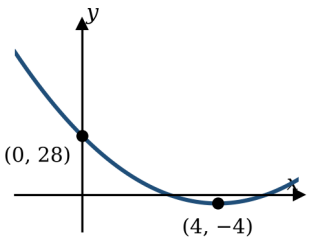
Day 7	S Tier 10-a-day
1 Each interior angle of a regular polygon is 4 times the size of each exterior angle. Work out the number of sides of the polygon.	
2 The ratio of Year 10 students to Year 11 students in a school is 3 : 5. 25% of the Year 10 students and 65% of the Year 11 students have a part-time job. What percentage of all of these students have a part-time job?	
3 Simplify fully $2\sqrt{7} \times \sqrt{3}$	
4 P is inversely proportional to the square root of t. When t = 16, P = 2. Find the positive value of t when P = 8.	
5 C is 40% less than D. D is 25% more than S. Work out C as a percentage of S.	

Day 7	S Tier 10-a-day
6 The radius of a circle is 4 cm, correct to the nearest centimetre. Work out the upper bound of the area of the circle. Give your answer in terms of π.	
7 The lengths of the sides of a right-angled triangle are $(x - 1)$ cm, $(x + 6)$ cm and $(x + 8)$ cm. The longest side is $(x + 8)$ cm. (a) Show that $x^2 - 6x - 27 = 0$ (b) Hence work out the area of the triangle.	
8 The diagram shows a sketch of a quadratic curve with a turning point at $(4, -4)$. The curve crosses the y-axis at $(0, 28)$. Find an equation of the curve. Give your answer in the form $y = ax^2 + bx + c$. 	
9 A force of 87 N acts on a surface, correct to the nearest whole number. The area of the surface is 24 m^2, correct to the nearest whole number. Work out the upper bound of the pressure. Give your answer correct to 3 significant figures. (Calculator)	
10 The nth term of a sequence is $3n^2 - 2n - 8$. (a) Work out the 8th term. (b) Is 125 a term of the sequence? You must show your working.	