Day 250	A Tier 10-a-day
1 Work out the value of $2x^2 - 4x + 9$ when $x = -3$	
2 A company has 220 employees in Sales, 140 in Admin and 280 in Production. A stratified sample of 32 employees is to be taken. Work out how many employees should be chosen from Admin.	
3 A jug holds $21\frac{3}{4}$ litres of juice. Glasses hold $\frac{3}{4}$ litre each. How many glasses can be filled completely?	
4 M is the midpoint of AB. A is the point (6, 3) and M is the point (5, 4). Work out the coordinates of B.	
5 Ali buys a painting for £800. He sells it for £768. Work out his percentage loss.	

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6 Two similar model boats have heights 15 cm and 25 cm. The surface area of the smaller one is 45 cm^2. Work out the surface area of the larger one.	
7 Show that $\frac{\sqrt{216}-\sqrt{96}}{\sqrt{6}}$ is an integer, and find its value.	
8 Solve $2x^2 + 2x - 2 = 0$ Give your solutions correct to 2 decimal places. (Calculator)	
9 PQ is a straight line of length 8 cm. A point S moves so that it is always 8 cm from the line PQ. Describe the locus of S.	
10 Rationalise the denominator of $\frac{17}{\sqrt{27}}$ Give your answer in its simplest form.	