Day 124	A Tier 10-a-day
1 Ben and Jack share 280 stickers in the ratio 5 : 9. How many more stickers does Jack get than Ben?	
2 Expand and simplify $(x + 5)^2 - (x + 5)(x + 5)$	
3 A shop sells pasta in 2 different sizes. Small bag: 250 g for 55p Large bag: 400 g for 80p Which bag is the best value for money? You must show your working.	
4 Write as a single fraction $\frac{-1}{(x-3)} + \frac{4}{(x-4)}$	
5 Work out the value of (a) 4^{-2} (b) $9^{\frac{3}{2}}$	

Day 124	A Tier 10-a-day
6 Simplify fully $\frac{x^2 + x - 6}{x^2 + 4x - 12}$	
7 Show that $\frac{\sqrt{75} + \sqrt{48}}{\sqrt{3}}$ is an integer, and find its value.	
8 The length and width of a rectangular poster are 7.3 cm and 9.3 cm. Each measurement is correct to 1 decimal place. Work out the lower bound for the area.	
9 Work out $(2\frac{5}{6} - 2\frac{1}{2}) \times 1\frac{1}{3}$ Give your answer as a mixed number in its simplest form.	
10 A solid is made from a cylinder and a hemisphere. The cylinder has radius 3 cm and height 13 cm. The hemisphere has the same radius as the cylinder and sits on top of it. Work out the total volume. Give your answer in terms of π.	