Day 12	B Tier 10-a-day
1 Triangle ABC is isosceles with AB = AC. Angle BAC = 126°. Work out the size of angle ABC.	
2 A car uses 20 litres of petrol to travel 400 km. Work out how many kilometres it travels on each litre of petrol.	
3 Two rectangles are joined to make a shape. The first is 12 cm by 8 cm. The second is 14 cm by 3 cm. Work out the total area of the shape.	
4 Use the fact that 16 × 46 = 736 to work out (a) 16 × 460 (b) 73,600 ÷ 16	
5 Solve 6(x + 3) = 42	

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6 Two buses leave a bus station at 08:15. One bus leaves every 10 minutes. The other bus leaves every 30 minutes. At what time do both buses next leave together?	
7 Solve the simultaneous equations $x - 4y = 13$ $2x + 2y = -4$	
8 A paddling pool is $\frac{2}{5}$ full. 33 litres of water are added. The paddling pool is now $\frac{1}{2}$ full. Work out the capacity of the paddling pool.	
9 A lorry travels at 50 km/h for 1.5 hours and then at 90 km/h for 1.5 hours. Work out its average speed for the whole journey.	
10 The equation $x^3 - x = 33$ has a solution between 3 and 4. (Calculator) Use trial and improvement to find this solution. Give your answer correct to 1 decimal place.	