Day 342	B Tier 10-a-day
1 A rectangular wall measures 13 m by 16 m. A rectangle measuring 5 m by 7 m is cut out. Work out the area that is left.	
2 A car travels 120 km in 1 hour 30 minutes. Work out its average speed in km per hour.	
3 Factorise $t^2 - 6t$	
4 Work out (a) $\frac{5}{9} \times \frac{1}{4}$ (b) $\frac{1}{2} \div \frac{9}{10}$ Give each answer in its simplest form.	
5 Matchsticks are used to make a row of hexagons. 1 hexagon needs 6 matchsticks, 2 hexagons need 11 and 3 hexagons need 16. (a) Find an expression, in terms of n, for the number of matchsticks needed for n hexagons. (b) Dan uses 71 matchsticks to make a row. How many hexagons are in his row?	

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6 A drum has radius 3 cm and height 18 cm. (Calculator) Work out its volume. Give your answer correct to 1 decimal place.	
7 Write each number as an ordinary number. (a) 9.7×10^{5} (b) 5.2×10^{-3}	
8 A pyramid has a rectangular base 10 m by 3 m and vertical height 6 m. Volume of a pyramid = $\frac{1}{3}$ × base area × height Work out the volume of the pyramid.	
9 Show that 4(2n + 5) + 4(2n + 11) is always a multiple of 16, where n is a whole number.	
10 A lorry travels at 30 km/h for 0.5 hours and then at 24 km/h for 2.5 hours. Work out its average speed for the whole journey.	