Day 124 **B Tier 10-a-day**

1 Write down the number of faces and vertices of a triangular prism.

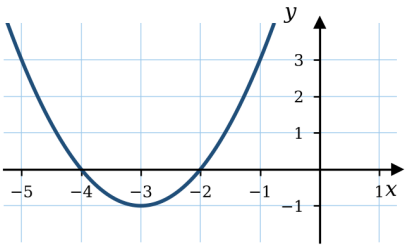
2 The table shows the masses of some parcels.
(a) Write down the modal class.
(b) Work out an estimate for the mean.

Mass, m (kg)	Frequency
$20 < m \leq 25$	3
$25 < m \leq 30$	8
$30 < m \leq 35$	4
$35 < m \leq 40$	5
$40 < m \leq 45$	5

3 A plumber charges a call-out fee of £8 plus £2 for each hour of work.
(a) Work out the total cost for 7 hours.
(b) The total cost is £32. Work out the number of hours.

4 In a bag of counters, the ratio of red to green is 1 : 7.
The ratio of green to yellow is 1 : 6.
Write down the ratio red : green : yellow.

5 Expand and simplify $(3x - 7)(x - 4)$

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6 The price of a laptop is £80. The price is first increased by 40%, then the new price is increased by 20%. (a) Work out the final price. (b) Work out the overall percentage increase in the price.	
7 The diagram shows the graph of $y = x^2 + 6x + 8$ (a) Write down the solutions of $x^2 + 6x + 8 = 0$ (b) Write down the coordinates of the minimum point of the graph. 	
8 A paddling pool is $\frac{1}{2}$ full. 36 litres of water are added. The paddling pool is now $\frac{3}{5}$ full. Work out the capacity of the paddling pool.	
9 Triangle ABC is isosceles with AB = AC = 12 m. (Calculator) The base BC = 18 m. Work out the size of angle ABC. Give your answer correct to 1 decimal place.	
10 A new car costs £13,000. (Calculator) Its value falls by 3% each year. Work out its value after 3 years. Give your answer to the nearest pound.	