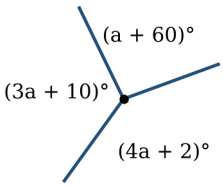
Day 193	B Tier 10-a-day
1 The diagram shows 3 angles round a point. Work out the value of a. The diagram is not drawn accurately.  	
2 On a map, 1 cm represents 1 km. A lake is 1.5 cm long on the map. Work out the real length of the lake.	
3 Write down the number of edges and vertices of a triangular-based pyramid.	
4 $E = \frac{1}{2}mv^2$ Work out the value of E when m = 2 and v = 8	
5 Write each answer as a single power of 3. (a) $(3^2)^2$ (b) $3^7 \times 3^2 \div 3^4$	

Day 193 **B Tier 10-a-day**

6 A stratified sample of 30 students is taken from the 200 students in the table.
Work out how many students should be sampled from Year 8.

Group	Students
Year 7	60
Year 8	80
Year 9	60

7 Solve $x^2 - 81 = 0$

8 A ladder 4 m long leans against a vertical wall. (Calculator)
The ladder makes an angle of 72° with the horizontal ground.
Work out how high up the wall the ladder reaches.
Give your answer correct to 1 decimal place.

9 Write 490 as a product of its prime factors.
Give your answer in index form.

10 Work out the value of this expression. (Calculator)

$$\frac{9.4^3}{1.8}$$

Give your answer correct to 3 significant figures.