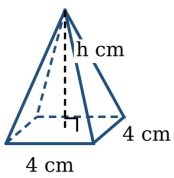
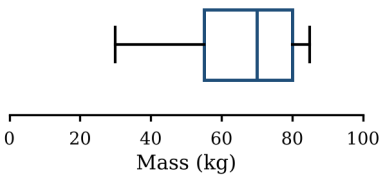
Day 153	A Tier 10-a-day
1 $s = ut + \frac{1}{2}at^2$ Work out the value of s when $u = -1$, $a = 4$ and $t = 5$	
2 Angle MNC is drawn on a piece of paper. A point P moves so that it is always the same distance from line NM and line NC. Describe the locus of P.	
3 By rounding each number to 1 significant figure, estimate the value of $\frac{59 + 9.9}{0.41}$	
4 Factorise $4x^2 + 4x - 3$	
5 The diagram shows a pyramid with a square base of side 4 cm. The volume of the pyramid is 16 cm^3. Work out the perpendicular height, h, of the pyramid. The diagram is not drawn accurately.  	

Day 153 **A Tier 10-a-day**

6 The box plot shows the masses, in kg, of the parcels in delivery A.
(a) Write down the median and the interquartile range.
For delivery B the median is 80 and the interquartile range is 20.
(b) Compare the distributions of the two deliveries.



7 A circle has a radius of 5 cm, correct to the nearest cm. (Calculator)
Work out the lower bound for the area of the circle.
Give your answer to 3 significant figures.

8 Jug A contains 12 litres of a mixture of orange juice and lemonade in the ratio 1 : 5.
Jug B contains 42 litres of a mixture of orange juice and lemonade in the ratio 4 : 3.
The contents of both jugs are mixed together.
Work out the ratio of orange juice to lemonade in the mixture. Give your answer in its simplest form.

9 £1 = $1.4.
(a) Change £380 to dollars.
(b) Change $364 to pounds.

10 n is the smallest positive integer such that 160 × n is a square number.
Find the value of n.