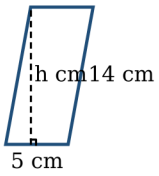
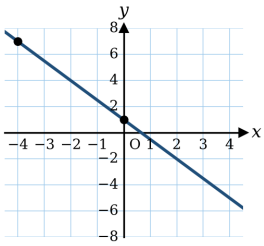
Day 193 **A Tier 10-a-day**

1 The ratio of cats to dogs in an animal shelter is 3 : 8.
There are 15 more dogs than cats.
Work out the number of cats.

2 The area of this parallelogram is 55 cm^2.
Work out the value of h.
The diagram is not drawn accurately.

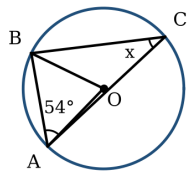


3 Work out the equation of the straight line.
Give your answer in the form y = mx + c



4 Priya has £540.
Priya spends $\frac{1}{4}$ of the money on a bike and $\frac{1}{5}$ of the money that is left on a helmet.
How much money does Priya have left?

5 The mean mark of 13 boys in a test is 54.
The mean mark of 13 girls in the same test is 40.
Work out the mean mark of all 26 people.

Day 193	A Tier 10-a-day
6 Make x the subject of $y = 5\sqrt{x} + 1$	
7 A, B and C are points on a circle with centre O. Angle OAB = 54°. (a) Work out angle AOB. (b) Work out the size of angle x. Give reasons for your answers. 	
8 Show that $\frac{\sqrt{150} - \sqrt{96}}{\sqrt{6}}$ is an integer, and find its value.	
9 The value of a painting increases by 2% each year. (Calculator) After 2 years it is worth £41,616. Work out its value at the start.	
10 A ship leaves a port and travels 12 miles on a bearing of 225°. (Calculator) It then travels 5 miles on a bearing of 315°. (a) Work out how far it is now from the port. (b) Work out the bearing of its final position from the port. Give your answer to the nearest degree.	