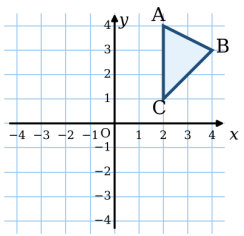
Day 175	B Tier 10-a-day
1 Simplify fully (a) $8a^2 \div 4a$ (b) $3x \times 5y$	
2 £1 = 1.25 dollars A holiday costs $25. Work out the cost in pounds.	
3 The number of members of a club goes from 400 to 420. Work out the percentage increase.	
4 Here are the first four terms of a sequence. 33, 29, 25, 21 Find an expression, in terms of n, for the nth term of this sequence.	
5 The diagram shows triangle ABC on a grid. (a) Write down the coordinates of the image of B after a reflection in the y-axis. (b) Write down the coordinates of the image of C after a reflection in the line x = 1. 	

Day 175	B Tier 10-a-day

6 There are 150 students.

$\frac{1}{5}$ of them are boys and the rest are girls.

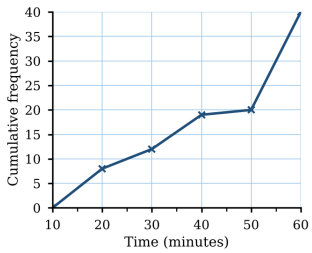
$\frac{1}{5}$ of the boys and $\frac{3}{5}$ of the girls walk to school.

One person is chosen at random. Work out the probability that they walk to school.

7 Solve $\frac{y}{2} + 1 > 3$

8 An isosceles trapezium has parallel sides of length 14 cm and 4 cm.
Each sloping side is 13 cm long.
(a) Work out the perpendicular height of the trapezium.
(b) Work out the area of the trapezium.

9 The cumulative frequency graph shows the times taken by 40 students to complete a puzzle.
(a) Use the graph to estimate the median.
(b) Work out an estimate for the interquartile range.



10 In a sale, the price of a sofa is reduced by 10%. (Calculator)
Two weeks later it is reduced by a further 20% of the new price.
The final price is £72.
Work out the original price of the sofa.