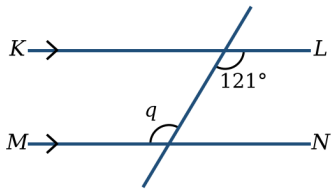
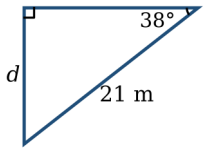
Day 263	B Tier 10-a-day
1 Simplify fully (a) $(x^4)^2$ (b) $x^3 \times x^5$	
2 What fraction of £1.50 is 45p? Give your answer in its simplest form.	
3 In the diagram, KL is parallel to MN. (a) Work out the size of angle q. (b) Give a reason for your answer. The diagram is not drawn accurately. 	
4 A triangle has sides of length (3x + 5) cm, (3x − 2) cm and (5x + 5) cm. Write down an expression, in terms of x, for the perimeter of the triangle. Give your answer in its simplest form.	
5 Write each number as an ordinary number. (a) 2×10^4 (b) 3.9×10^{-4}	

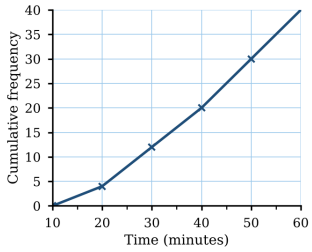
Day 263 **B Tier 10-a-day**

6 The probability that Amy is late for school on any day is 0.8.
The probability that Ben is late on any day is 0.9.
Whether each is late is independent of the other.
Work out the probability that at least one of them is late on Monday.

7 Find the length of d. (Calculator)
Give your answer correct to 1 decimal place.
The diagram is not drawn accurately.



8 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.



9 Here is an iteration formula.
$x_{n+1} = \sqrt{3x_n + 3}$
$x_0 = 2$
(a) Work out x_1
(b) Work out x_2. Give your answer correct to 3 decimal places. (Calculator)

10 In a sale, the price of a sofa is reduced by 25%. (Calculator)
Two weeks later it is reduced by a further 20% of the new price.
The final price is £75.
Work out the original price of the sofa.