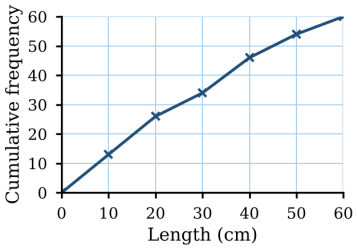
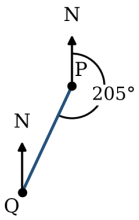
Day 243 **A Tier 10-a-day**

1 The cumulative frequency graph shows information about the length of 60 leaves.
Use the graph to find an estimate for
(a) the median,
(b) the number of leaves with a length greater than 30 cm.



2 The bearing of Q from P is 205°.
Work out the bearing of P from Q.
The diagram is not drawn accurately.



3 Solve $3(x - 4) = -4(x - 8) + 12$

4 A company has 80 employees in Sales, 140 in Admin and 140 in Production.
A stratified sample of 36 employees is to be taken.
Work out how many employees should be chosen from Admin.

5 A tower stands on horizontal ground. (Calculator)
From a point 50 m from the base of the tower, the angle of elevation of the top is 54°.
Work out the height of the tower. Give your answer to 3 significant figures.

Day 243	A Tier 10-a-day
6 A bag contains $3\frac{3}{8}$ kg of flour. Each cake uses $\frac{3}{8}$ kg of flour. How many cakes can be made?	
7 A bag contains red counters and blue counters in the ratio 5 : 2. 20 more blue counters are added to the bag. The ratio of red counters to blue counters is now 5 : 7. How many counters were in the bag at the start?	
8 A rectangle has width x cm and length (x + 2) cm. The area of the rectangle is 35 cm^2. (a) Show that $x^2 + 2x - 35 = 0$ (b) Work out the value of x.	
9 n is the smallest positive integer such that 675 × n is a square number. Find the value of n.	
10 Here are the first five terms of a quadratic sequence. −1, 5, 17, 35, 59 (a) Find an expression for the nth term. (b) Work out the 10th term.	