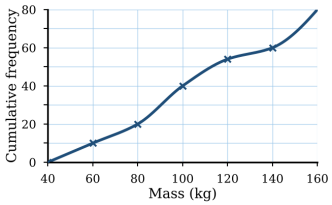
Day 345 **IGCSE 10-a-day**

1 Solve $8x^2 + 5 = -22x$

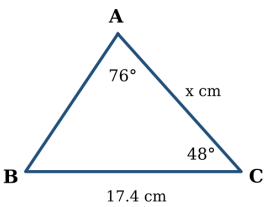
2 The cumulative frequency graph shows the masses, in kg, of 80 parcels.
(a) Find the median. (b) Find the interquartile range.
(c) How many parcels have a mass greater than 100?



3 Triangle ABC has AB = 17 cm and BC = 4 cm.
The area of triangle ABC is 17 cm^2.
Angle ABC is obtuse.
Work out the size of angle ABC.
Do not use a calculator.

4 $y = x^3 + 6x^2 + 9x - 6$
Use the second derivative to show that the curve has a minimum at $x = -1$.

5 Work out the length of AC.
Give your answer correct to 3 significant figures. (Calculator)



Day 345	IGCSE 10-a-day
6 $f(x) = -x^3 + 3x^2 + 6$ for $-2 \leq x \leq 4$. Find the greatest value and the least value of f(x) on this interval.	
7 In a club, the ratio of the number of boys to the number of girls is 7 : 2. Then 8 more boys are added and 16 more girls are added. The ratio is now 2 : 1. How many boys were there at the start?	
8 Solve the simultaneous equations $x^2 + y^2 = 45$ $x + y = 9$	
9 A curve has equation $y = x^3 + 3x^2 + 10x - 5$. (a) Show that the curve has no stationary points. (b) Find the least value of the gradient of the curve.	
10 Chen puts £6,000 in a savings account. Compound interest is paid at 1% in year 1, 2% in year 2 and 5% in year 3. Work out the amount in the account at the end of year 3. Give your answer to the nearest penny. (Calculator)	