Day 315 **A Tier 10-a-day**

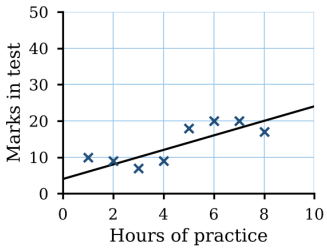
1 The size of each angle of a quadrilateral is shown as an expression:
$(2x + 5)°$, $(2x - 20)°$, $(x + 25)°$, $(3x + 6)°$
Work out the value of x.

2 The table shows the times, in minutes, taken by 50 people to finish a race.
(a) Write down the class that contains the median.
(b) Work out an estimate for the mean.

Time, t (minutes)	Frequency
$0 < t \leq 20$	20
$20 < t \leq 40$	7
$40 < t \leq 60$	20
$60 < t \leq 80$	3

3 The number of students in a school was 120 and is now 102.
Work out the percentage decrease.

4 The scatter graph shows the hours of practice and the marks in a test for some students.
A line of best fit is drawn.
(a) Describe the correlation.
(b) Estimate the marks for a student who practised for 2 hours.



5 An equilateral triangle and a regular decagon share the side AB and are on opposite sides of it.
The two shapes meet at the point A.
Work out the size of the angle at A that is not inside either shape.

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6 The sum of 4 consecutive whole numbers is 98. Work out the largest of the numbers.	
7 A piece of wood has a mass of 3164 g. The density of the material is 11.3 g/cm^3. Work out the volume of the piece of wood.	
8 $f(x) = \frac{5}{x} - 6$ (a) Find $f^{-1}(x)$ (b) Work out $f^{-1}(5)$	
9 Show that $\frac{\sqrt{28} + \sqrt{175}}{\sqrt{7}}$ is an integer, and find its value.	
10 Solve $\frac{4}{(x-1)} + \frac{4}{(x+5)} = 1$	