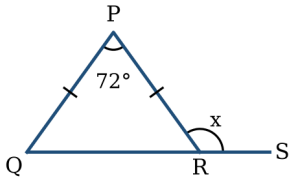
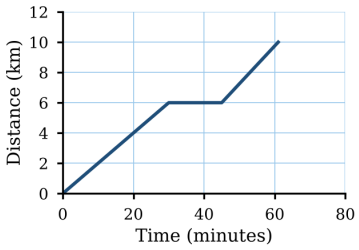
Day 183 **A Tier 10-a-day**

1 PQR is an isosceles triangle with PQ = PR.
QRS is a straight line.
Angle QPR = 72°.
Work out the size of angle x.
The diagram is not drawn accurately.



2 The graph shows the distance travelled by a runner.
(a) For how many minutes did the runner stop?
(b) Work out the speed during the final part of the journey. Give your answer in km/h.



3 The population of a village was 140 and is now 119.
Work out the percentage decrease.

4 (a) Solve $-7 \leq 5x - 7 < 18$
(b) Write down all the integer values of x that satisfy this inequality.

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

Day 183 **A Tier 10-a-day**

6 Expand and simplify
$4(x - 4)(x + 6) - (x + 6)(x - 6)$

7 Work out $(1\frac{3}{4} - 1\frac{1}{2}) \times 3\frac{1}{3}$
Give your answer as a mixed number in its simplest form.

8 The table gives information about 163 measurements.
A histogram is drawn using this information.
(a) Work out the missing frequency.
(b) Work out the height of the bar for the class $40 < t \leq 45$.

Time, t (minutes)	Frequency
$10 < t \leq 40$	84
$40 < t \leq 45$	15
$45 < t \leq 65$	32
$65 < t \leq 85$	?

9 A new car is worth £25000. (Calculator)
Its value falls by 5% each year.
Work out its value after 4 years.

10 Solve the simultaneous equations
$x^2 + y^2 = 25$
$y = 2x + 5$