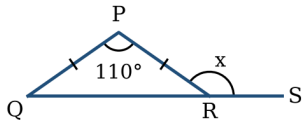
Day 190 **A Tier 10-a-day**

1 A shop sells cereal in 3 different sizes.
Small bag: 200 g for 60p
Medium bag: 500 g for £1.85
Large bag: 1000 g for £3.40
Which bag is the best value for money? You must show your working.

2 PQR is an isosceles triangle with PQ = PR.
QRS is a straight line.
Angle QPR = 110°.
Work out the size of angle x.
The diagram is not drawn accurately.



3 (a) Change 8 km^2 to m^2.
(b) Change 4.5 m^2 to mm^2.

4 The stem and leaf diagram shows the ages of 11 people.
Key: 3 | 0 represents 30 years
(a) Work out the median age.
(b) Work out the interquartile range.

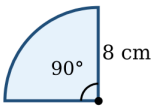
Stem	Leaf
3	0 2 7
4	2 7
5	0 2 7 9
6	4 8

5 Nadia buys a phone for £200 and sells it making a profit of 12%.
Work out the selling price.

Day 190 **A Tier 10-a-day**

6 A club has 80 members in junior, 90 in intermediate and 110 in senior.
A stratified sample of 28 members is to be taken.
Work out how many members should be chosen from intermediate.

7 The diagram shows a sector of a circle of radius 8 cm.
Work out the perimeter of the sector.
Give your answer in terms of π.
The diagram is not drawn accurately.



8 $f(x) = 4x + 7$
$g(x) = x^2 + 3$
Solve $fg(x) = 35$

9 (a) Show that the equation $x^3 + 3x - 39 = 0$ can be rearranged to give $x = \frac{39 - x^3}{3}$

(b) Show that the equation has a solution between $x = 3$ and $x = 4$

10 The diagram shows a cuboid.
Work out the length of the diagonal AG.
The diagram is not drawn accurately.

