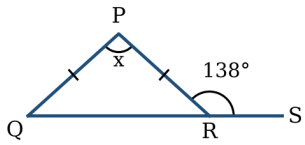
Day 49	A Tier 10-a-day

1 PQR is an isosceles triangle with PQ = PR.
QRS is a straight line.
Angle PRS = 138°.
Work out the size of angle x.
The diagram is not drawn accurately.

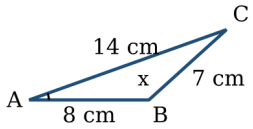


2 The scale of a map is 1 : 25000.
Two towns are 7.5 cm apart on the map.
Work out the real distance between the towns in kilometres.

3 Solve $7x - 6 \leq 2x - 11$

4 A stone has a mass of 135 g.
The density of the material is 0.5 g/cm^3.
Work out the volume of the stone.

5 Work out the size of angle x. (Calculator)
Give your answer to 1 decimal place.
The diagram is not drawn accurately.



Day 49	A Tier 10-a-day
6 The curve C has equation $y = -x^2 - 6x + 7$ (a) Find the coordinates of the points where C crosses the x-axis. (b) Find the coordinates of the turning point of C.	
7 (a) Write 36 and 120 as products of prime factors. (b) Find the highest common factor (HCF) and the lowest common multiple (LCM) of 36 and 120.	
8 Solve $x^2 \geq 121$	
9 12 pumps take 6 hours to empty a pond. All the pumps work at the same rate. How many pumps are needed to empty a pond in 24 hours?	
10 (a) Work out $\sqrt{3600}$ (b) Work out $\sqrt[3]{64000}$	