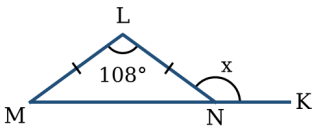
Day 87 **A Tier 10-a-day**

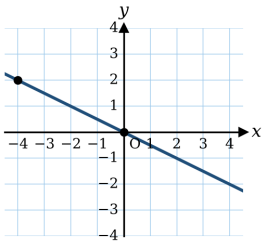
1 LMN is an isosceles triangle with LM = LN.
MNK is a straight line.
Angle MLN = 108°.
Work out the size of angle x.
The diagram is not drawn accurately.



2 Write $(10^7)^3 \div 10^5$ as a single power of 10.

3 A block rests on an area of 0.5 m^2 of the floor.
The pressure on the floor is 20 N/m^2.
Work out the force exerted by the block.

4 Work out the equation of the straight line.
Give your answer in the form y = mx + c



5 A cuboid has length 13 cm and width 9 cm.
Its total surface area is 454 cm^2.
Work out the height of the cuboid.

Day 87	A Tier 10-a-day
6 A stone has a volume of 140 cm^3. The density of the material is 2.7 g/cm^3. Work out the mass of the stone.	
7 $x_{n+1} = \sqrt{5x_n + 11}$ $x_0 = 3$ Work out the values of x_1, x_2 and x_3. Give your answers correct to 3 decimal places. (Calculator)	
8 Triangle LMN has vertices L(1, 0), M(5, −4), N(3, 0). The triangle is enlarged with scale factor $\frac{1}{2}$ and centre (1, −2). Write down the coordinates of the vertices of the image.	
9 Rationalise the denominator of $\frac{14}{\sqrt{7}}$ Give your answer in its simplest form.	
10 The graph of y = f(x) has a maximum point at (5, −2). Write down the coordinates of the turning point of the graph of (a) y = f(x) − 2 (b) y = 2f(x)	