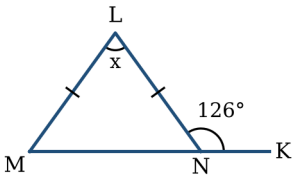
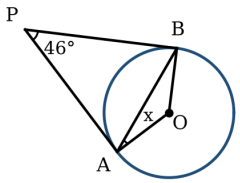
Day 60	A Tier 10-a-day
1 Make p the subject of $q = 9(p - 5)$	
2 LMN is an isosceles triangle with LM = LN. MNK is a straight line. Angle LNK = 126°. Work out the size of angle x. The diagram is not drawn accurately. 	
3 Here are the first four terms of a geometric sequence. 2, 8, 32, 128 (a) Write down the next two terms. (b) Work out the 6th term.	
4 A scientist wants to estimate the number of frogs in a pond. She catches 80 frogs, marks each one and returns them. Later she catches a second sample of 60 frogs. 4 of these are marked. Work out an estimate for the total number of frogs in a pond.	
5 Solve $8^x = 2$	

Day 60 **A Tier 10-a-day**

6 PA and PB are tangents to a circle with centre O.
Angle APB = 46°.
Work out the size of angle x (angle OAB).
Give a reason for each step of your working.



7 A block exerts a force of 300 N on the floor.
The pressure on the floor is 120 N/m^2.
Work out the area of the block in contact with the floor.

8 (a) Show that $0.\dot{9}\dot{6} = \frac{32}{33}$

(b) Hence write $4.\dot{9}\dot{6}$ as a mixed number in its simplest form.

9 The graph of y = f(x) has a maximum point at (0, 2).
Write down the coordinates of the turning point of the graph of
(a) y = f(2x)
(b) y = f(x) + 3

10 A, B, C and D are points on a circle. AC and BD meet at E.
Angle BAC = 56° and angle ACD = 62°.
Work out the size of angle x (angle AEB).
Give reasons for your working.

