Day 312	B Tier 10-a-day
1 Triangle DEF is isosceles with DE = DF. Angle EDF = 124°. Work out the size of angle DEF.	
2 Solve $8y - 5 = 5y - 17$	
3 A car travels 12 km on each litre of petrol. (Calculator) Petrol costs £1.45 per litre. Work out the cost of the petrol for a journey of 360 km.	
4 Find the (a) highest common factor (HCF), (b) lowest common multiple (LCM) of 28 and 63.	
5 A straight line has equation $y = 4x + 8$ (a) Write down the gradient of the line. (b) Write down the equation of a line that is parallel to this line and passes through the point (0, 4).	

Day 312 **B Tier 10-a-day**

6 (a) Write $\frac{1}{40}$ as a decimal.

(b) Write $\frac{1}{12}$ as a recurring decimal.

For part (b), write down the first 8 decimal places and say which digits repeat.

7 A crate exerts a force of 600 newtons on the floor.

The area in contact with the floor is 20 m^2.

Work out the pressure on the floor.

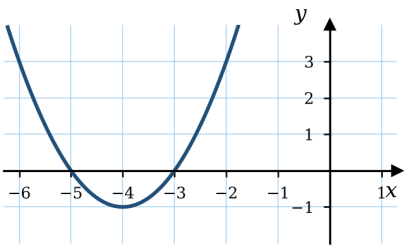
Give your answer in N/m^2.

8 The diagram shows the graph of

$y = x^2 + 8x + 15$

(a) Write down the solutions of $x^2 + 8x + 15 = 0$

(b) Write down the coordinates of the minimum point of the graph.



9 A cone has base radius 6 m and vertical height 9 m.

Volume of a cone = $\frac{1}{3}\pi r^2 h$

Work out the volume of the cone.

Give your answer in terms of π.

10 In a sale, the price of a sofa is reduced by 25%. (Calculator)

Two weeks later it is reduced by a further 5% of the new price.

The final price is £285.

Work out the original price of the sofa.