Day 284 **B Tier 10-a-day**

1 Work out the value of 2m + 3 when m = 8

2 The table shows the shoe sizes of students in a class.
Work out the mean.

Shoe size	5	6	7	8
Frequency	5	9	6	6

3 The nth term of a sequence is 9n + 9
(a) Work out the 11th term.
(b) Is 162 a term in the sequence? You must show how you get your answer.

4 Work out $3\frac{1}{2} + 3\frac{7}{8}$
Give your answer as a mixed number.

5 Solve 6(2x + 7) = 138

Day 284	B Tier 10-a-day

6 (a) Write $\frac{29}{40}$ as a decimal.

(b) Write $\frac{2}{15}$ as a recurring decimal.

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

7 Triangle PQR is isosceles with PQ = PR = 6 m. (Calculator)
The base QR = 4 m.
Work out the size of angle PQR.
Give your answer correct to 1 decimal place.

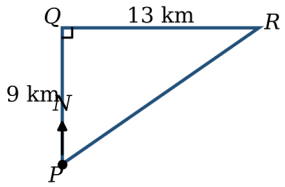
8 A storage tank is $\frac{2}{3}$ full.

56 litres of oil are added.

The storage tank is now $\frac{9}{10}$ full.

Work out the capacity of the storage tank.

9 A boat sails 9 km on a bearing of 000° from P to Q, then 13 km on a bearing of 090° to R. (Calculator)
(a) Work out the distance PR.
(b) Work out the bearing of R from P.
Give your answers correct to 1 decimal place.



10 A cyclist travels at 80 km/h for 0.5 hours and then at 20 km/h for 2.5 hours.
Work out its average speed for the whole journey.