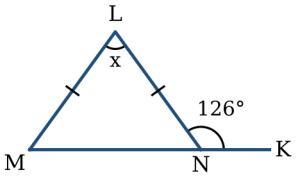
Day 107 **A Tier 10-a-day**

1 3 painters take 30 days to paint a hall.
All the painters work at the same rate.
How long would it take 6 painters to paint a hall?

2 ABC is an isosceles triangle with AB = AC.
BCD is a straight line.
Angle ACD = 126°.
Work out the size of angle x.
The diagram is not drawn accurately.



3 $f(x) = 4x - 3$
$g(x) = x^2 - 2$
(a) Find f(5)
(b) Find fg(x). Give your answer in its simplest form.

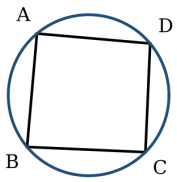
4 The table shows information about 52 people.
One person is chosen at random.
(a) Find the probability that the person chose chicken.
(b) The person is a woman. Find the probability that they chose pasta.

	Chicken	Pasta	Total
Men	11	16	27
Women	7	18	25
Total	18	34	52

5 Factorise fully $5x^2 - 45$

Day 107 **A Tier 10-a-day**

6 A, B, C and D are points on a circle.
Angle B = (5x + 25)° and angle D = (3x + 51)°.
(a) Work out the value of x.
(b) Work out the size of angle B.
The diagram is not drawn accurately.



7 Write the recurring decimal $0.\dot{6}\dot{5}$ as a fraction in its simplest form.

8 $f(x) = 3x - 7$
$g(x) = x^2 - 1$
Solve $gf(x) = 8$

9 A rectangle has length 4.8 m and width 10.1 m. (Calculator)
Each measurement is correct to the nearest 0.1 m.
Work out the lower bound for the area of the rectangle.

10 The diagram shows a cuboid.
Work out the length of the diagonal AG.
The diagram is not drawn accurately.

