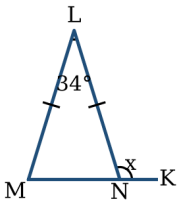
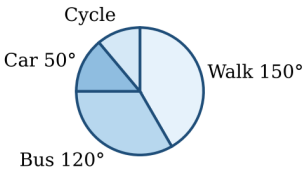
Day 359 **A Tier 10-a-day**

1 LMN is an isosceles triangle with LM = LN.
MNK is a straight line.
Angle MLN = 34°.
Work out the size of angle x.
The diagram is not drawn accurately.



2 A mechanic charges £25 plus £30 for each hour of work.
(a) Write a formula for the total cost, £C, after t hours.
(b) Aisha pays £295 in total. Work out the number of hours.

3 The pie chart shows how some students travel to school.
5 students chose car.
(a) Work out the angle for cycle.
(b) How many students chose cycle?



4 Solve x(x + 1) = 2

5 AB is a straight line.
A point S moves so that it is always 6 cm from the line AB, on one side of it.
Describe the locus of S.

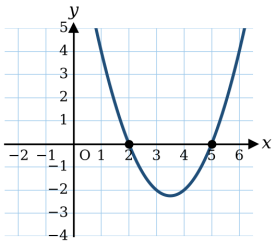
Day 359 **A Tier 10-a-day**

6 Rationalise the denominator of $\frac{30}{2\sqrt{5}}$

Give your answer in its simplest form.

7 The diagram shows the graph of $y = x^2 + bx + c$.

Find the value of b and the value of c.



8 Write $0.1\dot{8}$ as a fraction in its simplest form.

9 A plane leaves an airport and travels 6 km on a bearing of 155°. (Calculator)
It then travels 8 km on a bearing of 065°.
(a) Work out how far it is now from the airport.
(b) Work out the bearing of its final position from the airport. Give your answer to the nearest degree.

10 Jug A contains 35 litres of a mixture of concentrate and water in the ratio 4 : 3.
Jug B contains 12 litres of a mixture of concentrate and water in the ratio 1 : 1.
The contents of both jugs are mixed together.
Work out the ratio of concentrate to water in the mixture. Give your answer in its simplest form.