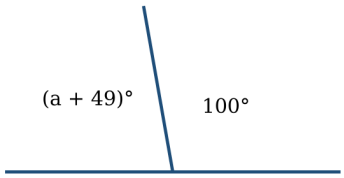
Day 93 **B Tier 10-a-day**

1 The diagram shows 2 angles on a straight line.
Work out the value of a.
The diagram is not drawn accurately.



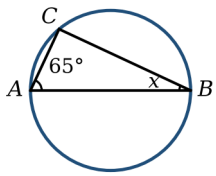
2 Write down all the common factors of 35 and 70.

3 A stratified sample of 50 students is taken from the 300 students in the table.
Work out how many students should be sampled from Group B.

Group	Students
Group A	120
Group B	60
Group C	120

4 Factorise $x^2 + 12x + 35$

5 Find the (a) highest common factor (HCF), (b) lowest common multiple (LCM) of 16 and 12.

Day 93	B Tier 10-a-day
6 A, B and C are points on a circle. AB is a diameter of the circle. Angle CAB = 65°. Work out the size of angle x. Give a reason for each step of your working. The diagram is not drawn accurately.  	
7 The price of a meal including VAT at 20% is £120. (Calculator) Work out the price of the meal before VAT was added.	
8 The first term of a sequence is 5. The term-to-term rule is: double the term, then add 4. Work out the 5th term.	
9 A cone has base radius 9 m and vertical height 3 m. (Calculator) Volume of a cone = $\frac{1}{3}\pi r^2 h$ Work out the volume of the cone. Give your answer correct to 1 decimal place.	
10 20 fish in a lake are caught, tagged and returned to the lake. Later, a sample of 40 fish is caught and 2 of them are tagged. Estimate the total number of fish in the lake.	