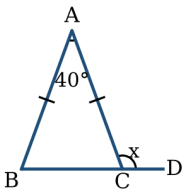
Day 77 **A Tier 10-a-day**

1 A machine exerts a force of 5 N on the floor.
The area in contact with the floor is 0.2 m^2.
Work out the pressure on the floor in N/m^2.

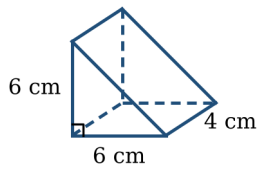
2 ABC is an isosceles triangle with AB = AC.
BCD is a straight line.
Angle BAC = 40°.
Work out the size of angle x.
The diagram is not drawn accurately.



3 Estimate the value of $\sqrt{24.9} \times 2.2$, by rounding 24.9 to the nearest square number and 2.2 to 1 significant figure.

4 Leah's weekly pay is increased by 10%.
Her new weekly pay is £22.
Work out her weekly pay before the increase.

5 The diagram shows a prism.
The cross-section of the prism is a right-angled triangle.
Work out the volume of the prism.
The diagram is not drawn accurately.



Day 77 **A Tier 10-a-day**

6 The table shows the heights, in cm, of 50 plants.
(a) Write down the class that contains the median.
(b) Work out an estimate for the mean.

Height, h (cm)	Frequency
$0 < h \leq 5$	2
$5 < h \leq 10$	28
$10 < h \leq 15$	10
$15 < h \leq 20$	10

7 Jack invests £6,500 in a savings account. (Calculator)
The account pays compound interest at 4% per year.
Work out the value of the investment after 4 years.

8 Expand and simplify
$(x + 4)(x + 1)(x + 2)$

9 The length and width of a rectangle are 10.8 cm and 6.3 cm.
Each measurement is correct to 1 decimal place.
Work out the upper bound for the area.

10 Solve the simultaneous equations
$y = x^2 - 5x - 3$
$y = -7$