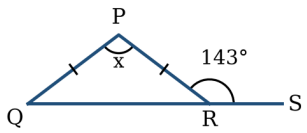
Day 286 **A Tier 10-a-day**

1 (a) Work out $\sqrt{3600}$

(b) Work out $\sqrt[3]{27000}$

2 PQR is an isosceles triangle with PQ = PR.
QRS is a straight line.
Angle PRS = 143°.
Work out the size of angle x.
The diagram is not drawn accurately.

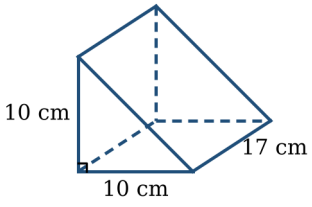


3 Work out $\frac{8.5 \times 4.9}{2.3}$ (Calculator)

Give your answer correct to 3 significant figures.

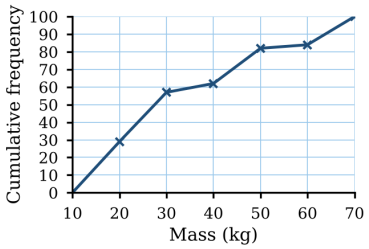
4 Solve the simultaneous equations
$3x - 4y = -11$
$-2x + 2y = 6$

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 286 **A Tier 10-a-day**

6 The cumulative frequency graph shows information about the mass of 100 parcels.
Use the graph to find an estimate for
(a) the median,
(b) the number of parcels with a mass greater than 40 kg.



7 A is the point $(-2, 3)$ and B is the point $(1, -3)$.
(a) Find the midpoint of AB.
(b) Work out the length of AB. Give your answer as a surd in its simplest form.

8 Write the recurring decimal $0.\dot{4}\dot{3}$ as a fraction in its simplest form.

9 Expand and simplify
$(2x + 4)(3x - 5)$

10 12 machines take 5 hours to make a batch of bottles.
All the machines work at the same rate.
How long would it take 2 machines to make a batch of bottles?