Day 330 **A Tier 10-a-day**

1 The graph of y = f(x) has a minimum point at (−3, 2).
Write down the coordinates of the turning point of the graph of
(a) y = f(x) + 4
(b) y = −f(x)

2 Work out $(1\frac{1}{5} + 3\frac{3}{5}) \times 2\frac{1}{4}$
Give your answer as a mixed number in its simplest form.

3 The table shows information about 25 matches.
(a) Work out the mean.
(b) Write down the mode.

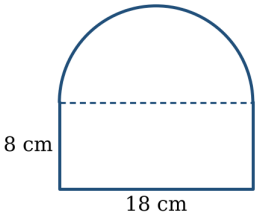
Goals scored	0	1	2	3	4
Frequency	11	5	5	3	1

4 The exchange rate is £1 = €1.18. (Calculator)
Aisha changes £850 into euros.
How much does Aisha get in euros?

5 (a) Factorise $25y^2 - 36z^2$
(b) Use the same idea to work out $67^2 - 33^2$ without a calculator.

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6 The diagram shows a shape made from a rectangle and a semicircle.
Work out the perimeter of the shape.
Give your answer in terms of π.
The diagram is not drawn accurately.



7 Work out the value of
(a) 10^{-2}
(b) $4^{\frac{-1}{2}}$

8 A cone has base radius 6 cm and perpendicular height 17 cm.
Work out the volume of the cone. Give your answer in terms of π.

9 Solve $\frac{2}{(x-4)} + \frac{2}{(x-1)} = 1$

10 The table gives information about 157 measurements.
A histogram is drawn using this information.
(a) Work out the missing frequency.
(b) Work out the height of the bar for the class $80 < h \leq 85$.

Height, h (cm)	Frequency
$0 < h \leq 30$	48
$30 < h \leq 60$	?
$60 < h \leq 80$	32
$80 < h \leq 85$	11