Day 79 **B Tier 10-a-day**

1 A school has 1624 students. They are put into equal groups of 28.
How many are in each group?

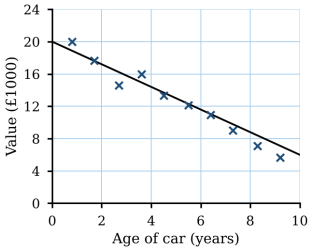
2 Expand and simplify $5(x + 6) + 6(x + 5)$

3 The ratio of boys to girls among the students in a class is 8 : 9.
There are 45 girls.
How many boys are there?

4 The diagram shows a circle with radius 3 mm.
Work out the area of the circle.
Give your answer in terms of π.
The diagram is not drawn accurately.

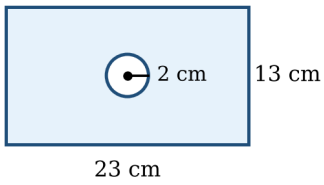


5 The scatter graph shows information about age of car and value.
A line of best fit is drawn.
(a) Describe the correlation.
(b) Use the line of best fit to estimate the value when age of car is 5.



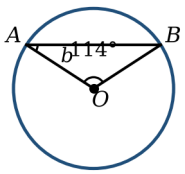
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6 The diagram shows a rectangle 23 cm by 13 cm with a circle of radius 2 cm cut out.
(Calculator)
The circle is in the centre of the rectangle.
Work out the area of the shaded region.
Give your answer correct to 1 decimal place.
The diagram is not drawn accurately.



7 Here are four digit cards.
4 9 3 7
Use all four cards to make the largest possible even number.

8 A and B are points on a circle, centre O.
Angle AOB = 114°.
Work out the size of angle b.
Give a reason for your answer.
The diagram is not drawn accurately.



9 A bag contains 3 green beads and 5 yellow beads.
Nia takes one at random, replaces it, then takes a second.
Work out the probability that both are green.

10 A theme park sells adult tickets and child tickets.
2 adult tickets and 2 child tickets cost £50.
4 adult tickets and 2 child tickets cost £84.
Work out the cost of one adult ticket and the cost of one child ticket.