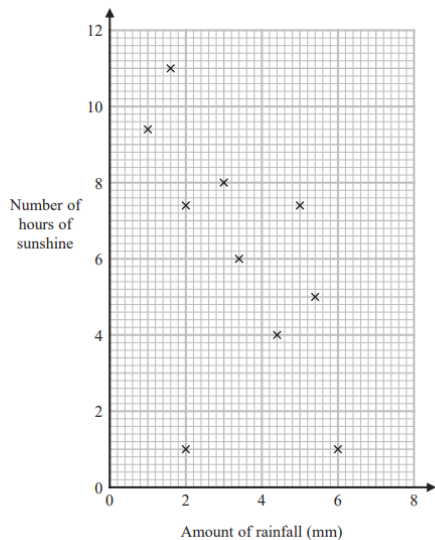


Edexcel GCSE Mathematics Calculator 2022 Higher Paper 2 Revision Worksheet

1. The scatter graph shows information about the amount of rainfall (in mm) and the number of hours of sunshine for each of ten English towns on the same day. One of the points is an outlier.

The scatter graph shows information about the amount of rainfall, in mm, and the number of hours of sunshine for each of ten English towns on the same day.



- (a) Write down the coordinates of this point.

(..... ,)

- (b) Ignoring the outlier, describe the relationship between the amount of rainfall and the number of hours of sunshine.

.....

- (c) On the same day in another English town there were 7 hours of sunshine. Using the scatter graph, estimate the amount of rainfall in this town on this day.

..... mm

2. Here are the first five terms of an arithmetic sequence: 7, 13, 19, 25, 31

- (a) Find an expression, in terms of n , for the n th term of this sequence.

.....

- (b) The n th term of a different sequence is $8 - 6n$. Is -58 a term of this sequence? You must show how you get your answer.

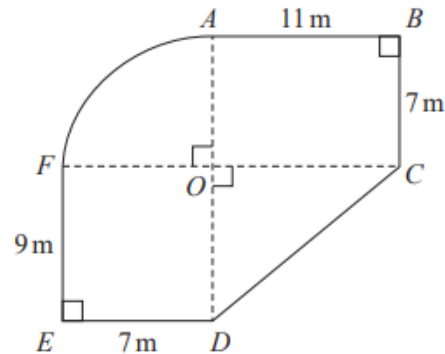
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3. The diagram shows a plan of Jason's garden.

$ABCO$ and $DEFO$ are rectangles.

CDO is a right-angled triangle.

AFO is a sector of a circle with centre O and angle $AOF = 90^\circ$



Jason is going to cover his garden with grass seed.

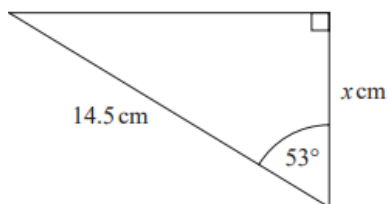
Each bag of grass seed covers 14 m^2 of garden.

Each bag of grass seed costs £10.95

Work out how much it will cost Jason to buy all the bags of grass seed he needs.

4. Work out the value of x in the following triangle. Give your answer correct to 3 significant figures.

A triangle has sides 14.5 cm and $x\text{ cm}$, with an included angle of 53° .

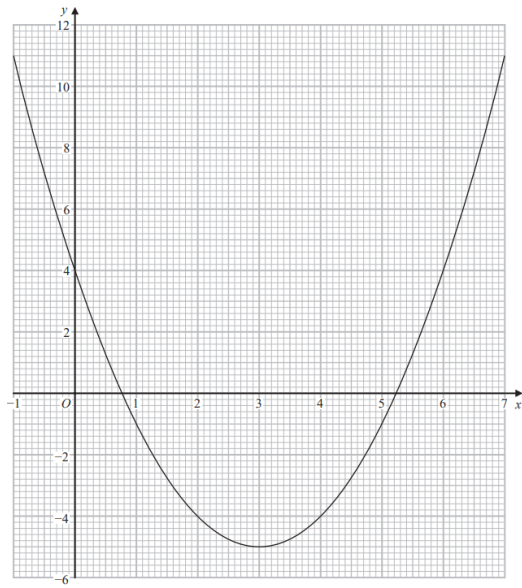


$x = \dots\dots\dots$

5. Ella invests £7000 for 2 years in an account paying compound interest. In the first year, the rate of interest is 3%. In the second year, the rate of interest is 1.5%. Work out the value of Ella's investment at the end of 2 years.

£.....

6. Here is the graph of $y = x^2 - 6x + 4$.



- (a) Write down the y-intercept of the graph.

.....

- (b) Write down the coordinates of the turning point of the graph.

(..... ,)

- (c) Use the graph to find estimates for the roots of $x^2 - 6x + 4 = 0$.

7. Chanda buys a necklace for £120. She sells the necklace for £135. **Work out her percentage profit?**

8. Here are the equations of two straight lines:

$$y = \frac{1}{2}x - 6 \qquad 6y = 3x + 7$$

Oscar says that these lines are parallel. Is Oscar correct? You must give a reason for your answer.

.....

9. Aaliyah bought a car. In the first year after she bought the car, its value depreciated at a rate of 23% per annum. In the second year after she bought the car, its value depreciated at a rate of 19% per annum.

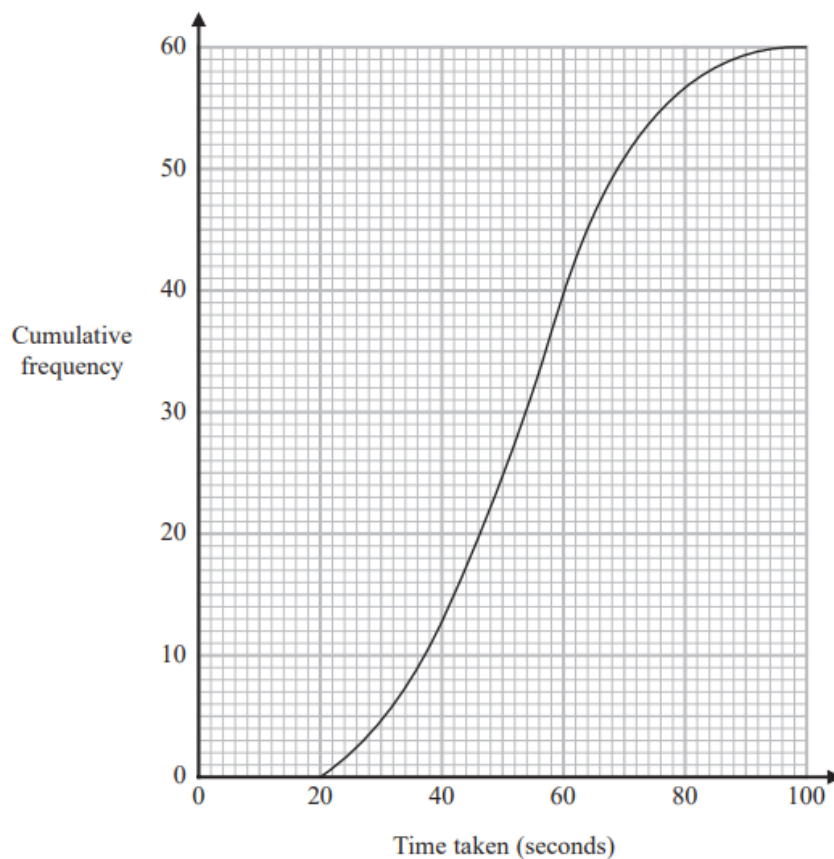
At the end of the second year the car was worth £10,914.

What was the value of the car when Aaliyah bought it?

10.

In an experiment, 60 students each completed a puzzle.

The cumulative frequency graph shows information about the times taken for the 60 students to complete the puzzle.



For these 60 students,

the least time taken was 24 seconds

the greatest time taken was 96 seconds.

On the grid below, draw a box plot for the distribution of the times taken by the students.

