Exam Command Words

Arrange – Put in order

Ascending – From smallest to biggest

Calculate – Do a sum to work out the answer

Construct – Draw accurately (use a ruler, compass and/or protractor)

Descending – From biggest to smallest

Describe – Write what is happening

Describe fully – Give ALL details about what is happening

Estimate – Don't work out exactly, round each number first then work out that answer

Expand – Multiply out of the bracket

Explain – Give reasons for your answer and show your working out.

Factorise – Put into a bracket/brackets (factorising is the opposite of expanding brackets)

Give a reason for your answer – Give a mathematical reason

Measure – Use your ruler/protractor

Simplify – Collect terms together or cancel down

Show that – Prove/Tell us why… (use a calculation if you can to prove the fact).

Solve – Work out what number the variable (letter) is worth

Work out – Find the answer to…

Work out the difference between – Subtract the 2 values

Write an expression – Write a phrase using algebra, e.g. 2x + 3y

Other Mathematical terminology

Integer – Negative or positive whole numbers including zero. E.g. -3, -2, -1, 0, 1, 2, 3

Reciprocal - The **reciprocal** of a fraction is the fraction turned upside-down. E.g. the reciprocal of 0.5 (1/2) is 2 (2/1)

Outlier – A point on a scatter plot that doesn't lie close to the general pattern.

Congruent – Exactly the same (same lengths, same angles)

Similar – One shape is a larger/smaller version of the other

Product – Multiply

Equidistant – Of equal distance

Geometric sequence - a sequence of numbers where each term after the first is found by multiplying the previous one by a fixed, non-zero number called the common ratio. For example, the sequence 2, 6, 18, 54, ... is a geometric progression with common ratio 3.

Arithmetic sequence - an arithmetic sequence is a sequence of numbers such that the difference between the consecutive terms is constant. ... For instance, the sequence 5, 7, 9, 11, 13, 15, . . . is an arithmetic progression with common difference of 2

Fibonacci sequence - A **Fibonacci sequence** is equal to the sum of the preceding two **numbers**
E.g. 0,1,1,2,3,5,8,13,21…

You must show all of your working – If a question says this you must show every single step, even if it seems obvious like 2 + 3 = 5. Write your whole method down clearly.

Remember to add ***units*** to your answer if they are not already provided e.g. cm^2 etc. (1 mark)

Commonly phrased exam questions with example answers & methods

Write the factors of 24 – 1, 2, 3, 4, 6, 8, 12, 24

Write as a product of prime factors –
E.g. $90 = 2 \times 3^2 \times 5$ (use a factor tree)

Find the nth term – write the number pattern out as an expression. E.g. 5, 7, 9, 11… 2n + 3

Describe fully the single transformation that maps shape A onto shape B – What has happened to shape A (Rotation, Translation, Reflection or enlargement?
E.g. Rotation, 90° clockwise, centre (1,2)

Make p the subject of the formula – Rearrange the formula in the same way you would solve an equation) so it begins with p = …

Work out the size of the angle marked x – Use angle facts to do this, show **all** of your working out and give reasons if asked

Write the equation of the line – Find the gradient and y intercept of the line and write it in the form y = mx + c (m is the gradient c is the y-intercept)

Find the overall percentage increase/profit/loss
Find the actual amount, then divide by the original amount and multiply by 100.

Calculate or Work out the length of AC – Use properties of shapes, Pythagoras or Trigonometry and show all of your working out.

Write down the modal class interval – This is the group that has the highest frequency (The mode)

Calculate an estimate for the mean –
1. Determine the midpoint of each interval, or class.
2. These midpoints must then be multiplied by the frequencies of the corresponding classes.
3. The sum of the products divided by the total number of values will be the value of the **mean**.