

Revision Checklist – Maths L2

Before taking the test, take a few minutes to check your knowledge so you have the information clear in your mind.

■ **You should be able to:**

- ✓ **understand and use positive and negative numbers of any size in practical contexts**

Use a calculator to find the following:

$$751+96 =$$

$$2,130-74 =$$

$$(-25)\times 71 =$$

$$160\div 8 = -7+8 =$$

- ✓ **carry out calculations with numbers of any size in practical contexts, to a given number of decimal places**

This includes working out estimates for calculations. Estimation is used to give an approximate answer

Example: If you are buying 49 books at 99p each then round the values to $50 \times \text{£}1 = \text{£}50$.

So £50 is enough to buy them.

- ✓ **Be able to round numbers. If it is a cost then ensure it is sensible. £21.599 should be written as £21.60**

Round the following:

$$76 \text{ to the nearest } 10 =$$

$$750 \text{ to the nearest } 100 =$$

$$26.593 \text{ to } 2 \text{ decimal places} =$$

$$15.7 \text{ to the nearest whole number} =$$

- ✓ **understand, use and calculate ratio and proportion, including problems involving scale**

This can include deriving or changing the subject of a **formula**. Formulae may include brackets.

This includes sharing an amount in a ration (1:n) and using ratios to find amounts e.g. parts in a mixture

Remember: **Ratio** is a way of comparing amounts or items. Always check the order, so if the ratio is cats : dogs put number of cats first. To simplify a ratio, divide each part of the ratio by the same number.

Simplify the following ratios

$$2:4:2 =$$

$$3:9:12 =$$

$$5:10 =$$

$$10:100:1000 =$$

✓ **understand and use equivalences between fractions, decimals and percentages**

Write $\frac{4}{8}$ in its simplest form:

Write these as fractions:

$$50\% =$$

$$25\% =$$

$$10\% =$$

$$75\% =$$

$$40\% =$$

Write these as decimals:

$$50\% =$$

$$25\% =$$

$$10\% =$$

$$75\% =$$

$$40\%$$

Put these in order of size (smallest to largest): $\frac{3}{5}$ $\frac{1}{2}$ $\frac{1}{4}$ $\frac{1}{3}$ $\frac{3}{4}$

- ✓ **understand and use simple formulae and equations involving one or two operations**

Be able to calculate the mean and enter values into formulae

- ✓ **recognise and use 2-D representations of 3-D objects**

Be able to recognise nets of simple shapes

- ✓ **find area, perimeter and volume of common shapes**

Be able to find the perimeter and area of rectangles, triangles and circles and the volume of cuboids and cylinders. Know how to split up composite shapes.

The **perimeter** is the distance round the edge,

The **area** of a rectangle = length x width, (units are squared, e.g. cm²)

The **area** of a circle = $A = \pi r^2$

The **volume** of a cuboid = length x width x height, (units are cubed, e.g. cm³)

Volume of a **cylinder** = Area of base x height

Always use the same units in a calculation (i.e. all centimetres, metres, etc)

- ✓ **use, convert and calculate using metric and, where appropriate, imperial measures**

This includes conversion between metric and imperial.

Remember:

Km m cm mm

Each unit is 10 times bigger than the next one to the right.

Convert the following:

200 cm = m,

30mm = cm

- ✓ **collect and represent discrete and continuous data, using information and communication technology (ICT) where appropriate**

Understand the difference between tally charts, frequency tables, pie charts, bar charts, line graphs, grouped frequency tables and scatter graphs.

✓ **Use statistical methods to investigate situations**

For example: comparing two groups using statistical measures.

To find the mean, add up all the values and divide by how many values there are.

The range is the difference between the largest and smallest value.

Data: 2, 3, 4, 5, 6, 4

Range =

Mean =

Mode =

Median =

✓ **use probability to assess the likelihood of an outcome.**

Probability = how likely something is to happen.

If an event is certain to happen, then it has a probability of 1 or 100%.

If an event is certain not to happen, then it has a probability of 0 or 0%.

If an event has a 1 in 4 chance of happening, then it has a probability of $\frac{1}{4}$ or 25%

If you toss a coin, the probability of throwing 'heads' = _____

If you roll a dice, then the probability of throwing a '6' is = _____