Understanding Ordnance Survey Grid References

OS Maps' grid references enable you to identify an exact location anywhere in the country.

A grid reference consists of a pair of letters, followed by a pair of digit strings. They are quite straightforward to understand and use, though the explanation (following) is a bit long!

The easiest grid refs have the pair of letters, followed by a pair of digit strings each two digits long, (e.g. SO 95 24). These are called 4-figure grid refs, and one of these allows you to identify a 1km x 1km square, within which to find a given location (e.g the entrance to Cheltenham Racecourse, for a winter TREC at the RDA centre, is in the grid square SO 95 24).

A 6-figure grid ref (two letters followed by a pair of digit strings each 3 figures long, e.g. SO 953 242) allows you to find a 100m x 100m square, within which to find a given location (e.g. this would get you pretty close to the roundabout off of which you turn into the Racecourse).

An 8-figure grid ref (two letters followed by a pair of digit strings each 4 figures long, e.g. SO 9535 2425) allows you to find a 10m x 10m square, within which to find a given location (e.g. the actual entrance to the Racecourse).
The Grid References section of a TREC POR at Level 2A and above uses 8 figure grid refs.

10 figure and 12 figure grid references are also possibilities, though on a larger scale map.

<u>Here's how the letters are arrived at:</u>
OS starts with a big square, divided into 5 equal rows and 5 equal columns. The letters A to Z (except for capital I) are inserted in alphabetical order into the smaller squares, starting with A in the top left hand corner, and finishing with Z in the bottom right hand corner.

This grid is notionally laid over Great Britain; the original big square represents 2500 x 2500 kms, so each smaller lettered square represents 500kms x 500kms. The North of Scotland is in H, and most of South and Southwest England is in S. (Some squares are over the sea).

Next, each 500kms x 500kms square is subdivided into 5 rows and 5 columns. This gives a grid of 100km x 100km squares, twenty five in A, twenty five in B, and so on. Again using alphabetical order, each square is given a second letter, but not using I. The 500kms x 500kms square labelled A becomes a grid of 100km x 100 km squares, labelled AA to AZ, and so on.

When all the 500kms x 500kms squares are done, Cornwall is in SW (!), and the Isle of White is in SZ.

Copy and paste this address into your search engine to get an illustration:

https://getoutside.ordnancesurvey.co.uk/guides/beginners-guide-to-grid-references/

If you look on the OS 1:25000 map for your home area, you should find a pair of blue letters in its corners – this tells you which 100 km x 100 km square your map partly covers.

Now for the digits:
Still looking at your 1:25000 map, notice that it is covered in a network of horizontal and vertical blue lines, producing smaller squares. Each of these squares represents 1km x1 km.
When you look along the four edges of the map, you see two-digit numbers, one for each of horizontal and vertical blue lines. The numbers are placed against a blue and white chequered bar, and each of the subdivisions along the bar represents 100 metres. The counting starts at 00 and 01, and continues to 99 and 00. The 00 is the point at which the letters change, because it is at one end of the 100kms. Your map may not start or finish at 00, though.

The blue lines which create the 1km x1 km squares are called Eastings and Northings. The vertical lines are numbered going East from the left hand (west) edge of your map – the reading-and-writing direction, so these are the Eastings. The horizontal lines are numbered going North up from the bottom (South) of the map, so these are the Northings.

To use a 4-figure grid reference to identify the 1 km x 1 km square in which your house is situated:
Write down the pair of letters from the corner of your map, to identify the correct 100km x 100km square (do this rather than using the map sheet number, because sometimes the letters change part way across a map – check if they do on your map).
Put your finger where your house is marked, and look at the bottom left hand (Southwest) corner of the 1km x 1km square it's in. You're going to identify this square by using first the Easting and then the Northing for this square, and they are always taken from the bottom left hand (Southwest) corner. To remember the order, think of the mnemonic "along the corridor and up the stairs".

To find the pair of numbers for the Easting, follow the vertical line from this corner either up or down to the top or bottom edge of the map, and record the two-digit number that the line is labelled with. You may find the number repeated along the line before the edge of the map.

Now find the pair of numbers for the Northing; follow the horizontal line from this corner either left or right across the map, and record the two-digit number that the line is labelled with. You may find the number repeated on the line before the edge of the map.

You should have something that looks like: SP 03 27, which would identify the 1km x 1km square for your house if you lived at, or very close to, Sudeley Castle in Winchcombe
(OS sheet OL45, the Cotswolds, North Sheet).

To get a more accurate location, you need to use a 6-figure grid reference. Proceed exactly as above, but when you note down the Easting, add a third digit by counting from the blue and white bar how many 100 metres you've gone East from the SW corner to get exactly in line with your location; and a third digit to your Northing, to show how many 100 metres you've gone North from the SW corner.
Sudeley Castle is at SP 031 276, and this grid ref identifies its location to within 100metres.

For even greater accuracy, the last number in each digit string of an 8-figure grid ref shows how many 10s of metres you've gone along or up from the last whole 100 metres. This pins your location down to within 10 metres. You would need a Roamer to help you measure this.