

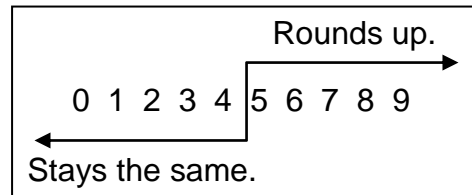
Decimals Places & Significant figures

Rounding Decimals:

Sometimes you could be asked to round a number to a certain number of decimal places (or to a whole number). This does not mean that you move the decimal point. You **leave the decimal point where it is** but get rid of some numbers from the end.

The method is to look at the next number after the one you want to stop at:

If **5 or above** then round the last number **up**.
If **4 or below** the last number **stays the same**.



Examples:

- Round 15.748 to 2 decimal places. *(You want 2 numbers after the decimal point.)*

You want the number to stop here.

15.748
1 2

Look at the next number (8). It is 5 or above so round the 4 up.

Answer is 15.75

*(decimal point has **not** moved but now there are only 2 numbers after it.)*

- Round 64.3463 to 3 decimal places.

You want the number to stop here.

64.3463
1 2 3

Look at the next number (3). It is less than 5 so the 6 stays the same.

Answer is 64.346

- Round 128.35 to 1 decimal place.

You want the number to stop here.

128.35
1

Look at the next number (5). It is 5 or above so the 3 rounds up.

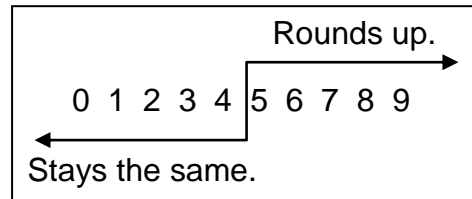
Answer is 128.4

Significant Figures:

For some questions you may be asked to give your answer to a certain number of significant figures instead of decimal places.

The method is the same as with decimal places except that you start counting from the very beginning of the number (instead of just after the decimal point):

If **5 or above** then round the last **number up**.
If **4 or below** the last number **stays the same**.



Examples:

- Round 15.748 to 3 significant figures.

(Start counting numbers from the beginning not just after the decimal point.)

You want the number to stop here.

15.748
1 2 3

Look at the **next** number (4). It is less than 5 so the 7 stays the same.

Answer is 15.7 (there are 3 figures in total)

- Round 64.3463 to 2 significant figures.

You want the number to stop here.

64.3463
1 2

Look at the **next** number (3). It is less than 5 so the 4 stays the same.

Answer is 64

- Round 128.35 to 2 significant figures.

You want the number to stop here.

128.35
1 2

Look at the **next** number (8). It is 5 or above so the 2 rounds up.

Notice the 0.

Answer is 130

We need to be careful with this one. We cannot put the answer 13, as it is nowhere near 128. We need to keep the "1" in the "100's" column and the "3" in the "tens" column so we add a zero to keep them in place.