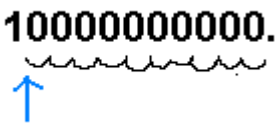
Notes: Scientific Notation

WRITING IN SCIENTIFIC NOTATION

Let's say we have the number 10000000000 and we want to write this number in scientific notation.

There are 10 zeros before the decimal point, right?

Ok, to begin writing in scientific notation, I would have to move the decimal point to the left until I get a number that is less than 10.



1.0 is a number that is less than 10.

Now how many spaces did the decimal point move? 10 right?
The number of places that the decimal point moves will be the power or exponent that we use in our notation.

So in scientific notation, our number 10000000000 will be 1.0×10^{10}

Let's take another example 27000000

We have to move the decimal point to the left until we get a number less than 10.

We have to go past the 7 and land the decimal in between 2 and 7.
The decimal point moved 7 spaces to the left.
So in scientific notation, this will be 2.7×10^{7}.