## Comparing Fractions, Decimals, Percents, and Scientific Notation Interactive Note-Taking Worksheet

- Fractions can be your friend! A fraction is made up of two parts. The top part is called the \_\_\_\_\_\_. The bottom part is called the \_\_\_\_\_\_.
- Convert \_\_\_\_\_ into a decimal. First type \_\_\_\_\_ then the \_\_\_\_\_ symbol and then \_\_\_\_\_The answer is \_\_\_\_\_.
   Now convert \_\_\_\_\_\_ into a decimal. The answer is \_\_\_\_\_\_.
   Finally, let's convert \_\_\_\_\_\_. The answer is \_\_\_\_\_\_.
- Sometimes it is necessary to convert a number into scientific notation or from scientific notation to \_\_\_\_\_\_ form.
   Here is how it is done:
- First let's go from scientific notation to standard form. (It's super easy! Let's take 3.412 × 10<sup>4</sup> all you have to do is type in 3.412 times 10 then hit the \_\_\_\_\_\_ symbol and the 4 and the calculator does the work. If your calculator isn't handy, all you have to do is move your decimal four spots to the \_\_\_\_\_\_.
- If your scientific notation number has a negative like 3.412 x 10<sup>-4</sup>, the procedure is the same but you hit the four and then the \_\_\_\_\_\_. Your answer is \_\_\_\_\_\_. If your calculator isn't handy, remember that the negative four just means that you move your decimal four spots to the \_\_\_\_\_\_.
- Converting a number from standard form to scientific notation is also pretty easy. Take
  the number 34,567,890. If converting by hand you just start with the decimal and then
  count how many spots it takes to get to just \_\_\_\_\_\_ number before the decimal. If you
  are moving your decimal to the left your exponent is \_\_\_\_\_\_. If you are moving your
  decimal to the right your exponent is \_\_\_\_\_\_.

Write these two examples as reference:

Example 1:

## Example 2:

- To convert a number from standard notation to scientific notation is a piece of cake! You just type in the number exactly as you see it. Then you hit the \_\_\_\_\_\_ button which is \_\_\_\_\_\_. Next if you look above the number \_\_\_\_\_\_ you will see \_\_\_\_\_\_. This stands for scientific notation. Let's take the number 1,234.56. Just punch that into your calculator. Hit the \_\_\_\_\_\_ and \_\_\_\_\_\_ and presto! Your number now says \_\_\_\_\_\_. Now all you have to remember is to write it as \_\_\_\_\_\_ and you are all converted!
- 4. Converting percents to decimals is even easier! All you need to do is move your decimal point over \_\_\_\_\_\_ places to the left. Then remove that worrisome \_\_\_\_\_\_ symbol. And Abracadabra you have converted a percent into a \_\_\_\_\_\_! Hint: If there is no decimal, you start by putting one to the far right of the number and then begin!
- 5. Now it's your turn! 98% = \_\_\_\_\_ 71% = \_\_\_\_\_ .06% = \_\_\_\_7.1% = \_\_\_\_\_ .9% = \_\_\_\_\_ 26% = \_\_\_\_\_
- 6. Now let's talk about decimals! Decimals are just like regular numbers. The bigger the decimal . . . The bigger the number. Which is bigger? .045 or .45? To figure this out you need to fill in a \_\_\_\_\_ at the end so that they are even, and then imagine that the decimal is no longer there. This would give you 045 and 450. Now which one is bigger?
- 7. Here comes the tricky part! Now we have to learn how to put a list of fractions, decimals and percents in order from\_\_\_\_\_! The first thing we need to do is write each one of them on a line going \_\_\_\_\_our paper. Next we need to convert each of them into\_\_\_\_\_. Then we need to put a little letter beside

each of them - with \_\_\_\_\_being the littlest and \_\_\_\_\_being the greatest. Finally we need to re-order them from least to greatest in their original form using our letter system. If you have a multiple choice question, then at this point you need to choose the answer that looks like yours, if not then just write your answer!

8. Which list of numbers is in order from least to greatest?

- a) 0.3, 4/5, 27%, 3 x 10<sup>-3</sup>
- b) 27%, 0.3, 3 x 10<sup>-3</sup>, 4/5
- c) 4/5, 3 x 10<sup>-3</sup>, 0.3, 27%
- d) 3 x 10<sup>-3</sup>, 27%, 0.3, 4/5

Let's take it one step at a time: The first thing we need to do is write each one in a line going down our paper. Since we have four different choices we should start with choice "A" and convert those.



Now which list of numbers is in order from least to greatest?

- a) 0.3, 4/5, 27%, 3 x 10<sup>-3</sup>
- b) 27%, 0.3, 3 x 10<sup>-3</sup>, 4/5
- c) 4/5, 3 × 10<sup>-3</sup>, 0.3, 27%
- d) 3 × 10<sup>-3</sup>, 27%, 0.3, 4/5