Adding and Subtracting Decimals

When adding or subtracting decimals, it sometimes helps to think about how we deal with money.

The biggest mistake folks make with adding and subtracting decimals is not lining up the decimal points. We must **always** line up the decimal points when adding and subtracting, just like with regular whole numbers.

Where are the "understood" decimal points on the following numbers?

543 7,543 36,589,764 3

So, when we add something like this: 524 + 23 + 164, what we're really doing is lining up decimal points:

$$\begin{array}{r} 524 \\ 23 \\ +164 \\ \hline \end{array} \quad \rightarrow \quad \begin{array}{r} 524. \\ 23. \\ +164. \\ \hline \end{array}$$

See the decimal points to the right?

We **are not** just shoving everything over to the right!! So, we can't do that with decimal numbers either!

Ex: 14 + 1.3 + 0.97

If we look at this like money, we'll see that 14 is like \$14, while 0.97 is like \$0.97 (97 cents) Here's how we line these numbers up to add them. →

$$\begin{array}{r} 14 \\ 1.3 \\ +0.97 \\ \hline \end{array}$$

It may be more helpful to put in zeroes as placeholders, though, just like we do with money. This way, there's not as much chance of adding things in the wrong column!

$$\begin{array}{r} 14.00 \\ 1.30 \\ +0.97 \\ \hline \end{array}$$

Subtraction works the exact same way.

Ex: 14.6 – 3.74 → $\begin{array}{r} 14.60 \\ -\,3.74 \\ \hline \end{array}$

We really almost have to put in the "0" placeholder here so that we can "borrow".

Ex: 20 – 12.67 → $\begin{array}{r} 20.00 \\ -\,12.67 \\ \hline \end{array}$

This is like giving the cashier a $20 when the bill is $12.67. The answer you get is the change you should receive back.

So, let's try a few:

1) 36.75 + 16.9 + 49

2) 456.75 + 76.3 – 34

3) 534.654 – 156.2

4) 43 – 13.65 + 15