DECIMAL OPERATIONS

- **Decimal operations** refer to the mathematical operations that can be performed with decimals: addition, subtraction, multiplication and division.

- The process for adding, subtracting, multiplying and dividing decimals must be followed in order to achieve the correct answer. Decimals can be used in all operations and also with integers in all operations. Decimals can also be used in algebraic equations.

- A typical situation of an equation with decimals is dollars and cents.

How to use decimal operations:

- The process of **adding and subtracting decimals** must be used in order to achieve the correct answer. When adding or subtracting decimal

- To add **p** for all decimal ints are lined up he decimal

Examples:

23.825	16.325
+ .067	- 2.9
23.892	13.425

- When **dividing decimals by integers**, the decimal point is brought up into the answer and then the numbers are divided.

Example:

$$3.24 \div 6 \rightarrow 6\overline{)3.24} \rightarrow \begin{array}{r} .54 \\ 6\overline{)3.24} \\ \underline{30\downarrow} \\ 24 \\ \underline{24} \\ 0 \end{array} \rightarrow .54$$

- When **dividing decimals by decimals** or **integers by decimals**, the decimal point is sometimes moved, depending on the numbers being divided by. If 13.5 is divided by 1.5, the decimal point will need to be moved over in the divisor and dividend. This will affect where the decimal point is in the quotient or answer. If 14 is divided by 2.5, the decimal point again will have to be moved over in the divisor and dividend to make 2.5 a whole number, 25, and 14 to become 140. The decimal point is then moved into the answer and the numbers are divided.

  Example:

  $13.5 \div 1.5 \rightarrow 1.5\overline{)13.5} \rightarrow 15\overline{)135.}$ ← decimal moved 1 place

  $$\begin{array}{r} 9. \\ 135 \\ \hline 0 \end{array}$$

- Decimals can be used to solve algebraic equations the same as integers as long as the rules for adding, subtracting, multiplying and dividing are followed.

Try This!

Add the following:

1.59 +. 002_____

26.389 + 1.74_____

.099 + 6.03 _____

Subtract the following:

14.005 - 6.7_____

3.72 - .086_____

.0956 - .002

Divide the

16.75 ÷ 5_

3.9 ÷ 3___

240.075 ÷

4.2 ÷ 2.1_____

40.95 ÷ 9.1_____

255 ÷ 5.1_____

244 ÷ 30.5_____

Solve for x:

x + 1.2 = 14.5_____

x - 22.65 = 5.07_____

$3.99x = $59.85_____

4.099 ÷ x = 59.85_____