Difficulty with Decimals? Self-Help Guide!

Adding Decimals

Addition requires "like terms" which means that tenths must be added to tenths and hundredths to hundredths. In other words, it is necessary to line up the decimal points which will line up the digits with the same place value. Add zeros as place holders if needed.

Example #3: 125.23 + 6.15

Line up decimal points:

$$
\begin{array}{r}
125.23 \\
+\quad 6.15 \\
\hline
131.38
\end{array}
$$

Example #4: 0.42 + 14.5 + 72

Line up decimal points:

$$
\begin{array}{r}
0.42 \\
14.5 \\
+\ 72. \\
\hline
\end{array}
$$

In a whole number, the decimal point (although not originally shown) is to the right of the last digit.

Add zeros, if necessary:

$$
\begin{array}{r}
0.42 \\
14.50 \\
+\ 72.00 \\
\hline
86.92
\end{array}
$$

It is possible to verify this process by considering money (in dollars) which is represented as decimals to the hundredths place. To add money amounts, there is no doubt that the decimal points would have to line up so that cents are added to cents and dollars to dollars.

Example #5: $112 + $40.75 + $5.12

Line up decimal points:

$$
\begin{array}{r}
\$112. \\
\$\ 40.75 \\
+\ \$\quad 5.12 \\
\hline
\end{array}
$$

In a whole number, the decimal point (although not originally shown) is to the right of the last digit.

Add zeros, if necessary:

$$
\begin{array}{r}
\$112.00 \\
\$\ 40.75 \\
+\ \$\quad 5.12 \\
\hline
\$157.87
\end{array}
$$

To add repeating decimals, convert the repeating decimals to fractions (see Example 2 in Understanding Decimals Guide).

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