

Check Your Answers on Decimal Operations!

$$\begin{array}{r} 1) \ 2.75 \\ + \ 2.30 \\ + \ 0.45 \\ \hline 2.75 \end{array}$$

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.

$$\begin{array}{r} 2) \ 38.5 \\ + \ 7.5 \\ + \ 31.0 \\ \hline 38.5 \end{array}$$

A whole number does not typically display the decimal point which is understood to be at the end of the number. Add the decimal point and zeros as needed, lining up the decimal points.

$$\begin{array}{r} 3) \ 4.476 \\ - \ 9.876 \\ - \ 5.400 \\ \hline 4.476 \end{array}$$

Subtraction also requires “like terms” which means that tenths must be subtracted from tenths and hundredths from 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.

$$\begin{array}{r} 4) \ 3.199 \\ - \ 3.200 \\ - \ 0.001 \\ \hline 3.199 \end{array}$$

Again, line up the decimal points, using zeros as needed.

$$\begin{array}{r} 5) \ 0.0012 \\ \times \ 0.03 \\ \hline 0.0012 \end{array}$$

2 digits to the right of the decimal point

2 digits to the right of the decimal point

4 digits to the right of the decimal point in the answer

Multiplication does **not** require “like terms.” It is **not** necessary to line up the decimal points. When multiplying decimals, move the decimal point by counting the number of digits to the right of the decimal point in the numbers multiplied.

$$\begin{array}{r} 6) \ 0.0060 \\ \times \ 1.2 \\ \times \ 0.005 \\ \hline 0.0060 \end{array}$$

1 digit to the right of the decimal point

3 digits to the right of the decimal point

4 digits to the right of the decimal point in the answer

It is not necessary to include the final 0, shown in gray (except in science as a significant digit!).

$$7) \ 9.2 \quad \begin{array}{l} \text{divisor} \swarrow \searrow \\ 3.68 \div 0.4 = 0.4 \end{array} \quad \begin{array}{l} \text{quotient} \nearrow \\ 9.2 \end{array} \quad \begin{array}{r} 3.68 \\ 0.4 \overline{) 3.68} \\ \underline{3.6} \\ 8 \end{array} = 4 \overline{) 36.8}$$

If there is a decimal in the divisor, multiply by a power of 10 to convert the divisor to a whole number. The dividend must also be multiplied by that same number. Multiplying by a power of ten moves the decimal point in both the divisor and dividend to the right.

$$8) \ 1000 \quad 70 \div 0.07 = 0.07 \overline{) 70.00} = 7 \overline{) 7000}$$

Add zeros as place holders when necessary.

$$\begin{array}{r} 9) \ 14.0432 \\ + \ 13.50 \\ + \ 0.79 \\ \hline 14.29 \end{array} \quad \begin{array}{r} 14.2900 \\ - \ 0.2468 \\ \hline 14.0432 \end{array}$$

Yes!! Great work!

$$\begin{array}{r} 10) \ 231 \\ \times \ 15.4 \\ \times \ 0.03 \\ \hline 0.462 \end{array}$$

1 digit to the right of the decimal point

2 digits to the right of the decimal point

3 digits to the right of the decimal point in the answer

$$0.462 \div 0.002 = 0.002 \overline{) 0.462} = 2 \overline{) 462}$$

Perfect score? Yes! You’ve got this!! You’re ready to move on to the next section!!!