

Dividing Decimals

Helpful Hints: $\begin{array}{r} \text{quotient} \\ \text{divisor} \overline{) \text{dividend}} \end{array}$

*If the divisor is not a whole number, move the decimal point to the right to make it a whole number.
 $3.2 \overline{) 200.}$

*Move the decimal point in the dividend the same number of places.

*Put the decimal point directly above the decimal point in the dividend.

*Divide as usual. Keep dividing until the quotient terminates or repeats.

Find the quotient.

Ex.1 $16.9 \div 6.5$

$$\begin{array}{r} 6.5 \overline{) 16.9} \\ \underline{130} \\ 390 \\ \underline{390} \\ 0 \end{array} = 2.6$$

Ex.2 $5.7 \div 0.3$

$$\begin{array}{r} 3 \overline{) 57} \\ \underline{30} \\ 27 \\ \underline{27} \\ 0 \end{array} = 19$$

DON'T FORGET.....

*A negative divided by a negative = a positive!

*A negative divided by a positive = a negative!

Find the quotient.

Ex.1 $-8.7 \div 1.5$

$$\begin{array}{r} 1.5 \overline{) 87} \\ \underline{15} \\ 32 \\ \underline{30} \\ 20 \\ \underline{15} \\ 50 \\ \underline{45} \\ 50 \\ \underline{45} \\ 50 \end{array} = -5.8$$

Ex.2 $-4.784 \div 1.5$

$$\begin{array}{r} 1.5 \overline{) 47.84} \\ \underline{15} \\ 32 \\ \underline{30} \\ 28 \\ \underline{22} \\ 64 \\ \underline{60} \\ 44 \\ \underline{45} \\ 14 \end{array} = -3.1893$$

Ex.3 $-2.589 \div -0.8$

$$\begin{array}{r} 0.8 \overline{) 25.89} \\ \underline{16} \\ 98 \\ \underline{96} \\ 29 \\ \underline{24} \\ 59 \\ \underline{56} \\ 39 \\ \underline{32} \\ 69 \\ \underline{64} \\ 29 \end{array} = 3.23625$$

Apply What You Know.....

1.) John's car gets 32 miles to the gallon. After a trip to his new house, he had driven 531.2 miles. How many gallons of gas did he use?

$$\begin{array}{r} 32 \overline{) 531.2} \\ \underline{32} \\ 211 \\ \underline{192} \\ 192 \\ \underline{192} \\ 0 \end{array} = 16.6 \text{ gal.}$$

2.) In order to mow the lawn, we need to buy some gasoline for our lawnmower. If we bought 3.5 gallons of gas and paid \$4.55, how much did the gas cost per gallon?

$$\begin{array}{r} 3.5 \overline{) 4.55} \\ \underline{35} \\ 105 \\ \underline{105} \\ 0 \end{array} = \$1.30$$

Warm up $10/4$

The all time high temperature in Chicago was 101°F . The all time low temperature was -21°F . What is the difference?

$$\begin{array}{r} 21 \\ 101 \\ \hline 122 \end{array}$$