

To Multiply Numbers with Decimals

Line Up Numbers All the Way to the Right (As if the Decimals Were Not There)

1.20 x 4.25

Place the longer
number on top.

Get rid of pointless
zeros.

4.25
x 1.20

Count how many
"hops" from the
right to the decimal.

Count again.

850

Remember to
place a zero on
the second line.

+ 4,250

5.100

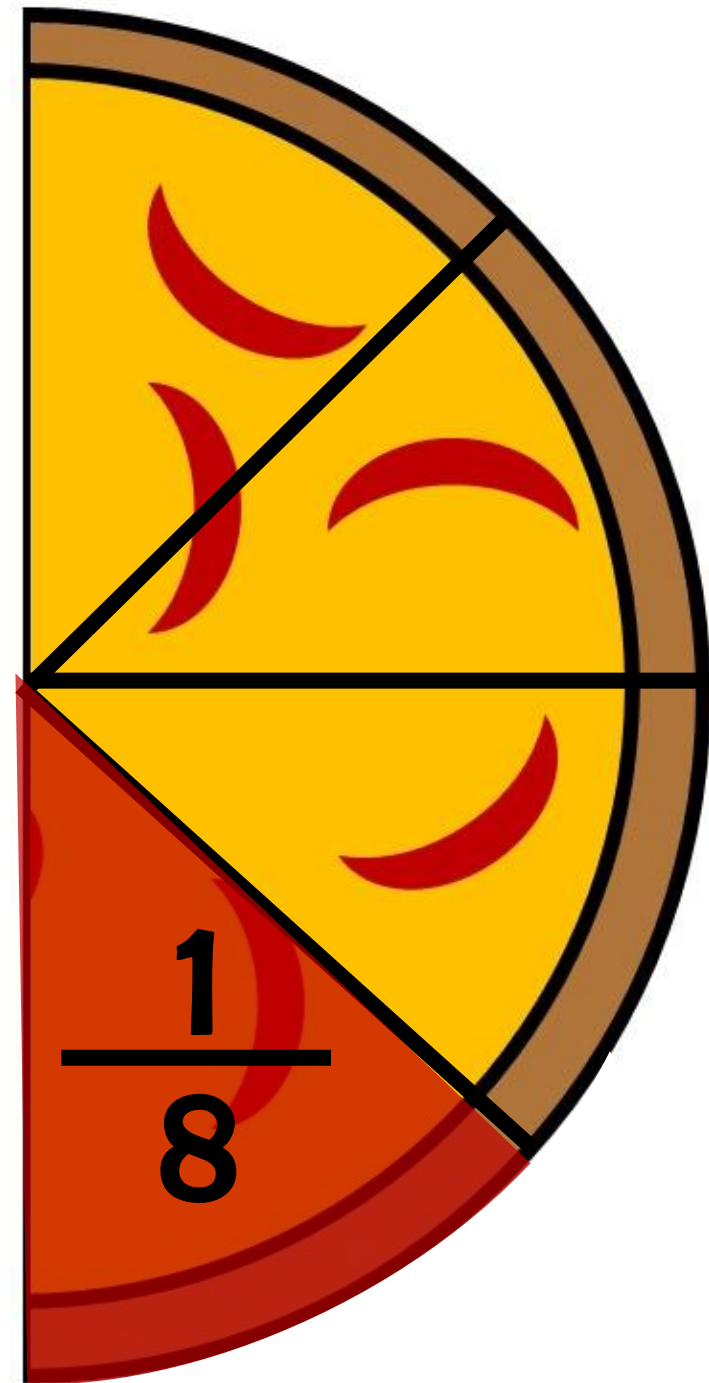
2 hops + 1 hop = 3 hops.
Place the decimal the
same number of hops
from right to left.

Decimal “of” # means to multiply the decimal by the #.

$$0.25 \text{ of } 0.5 = \begin{array}{r} 0.25 \\ \times 0.5 \\ \hline 0.125 \end{array}$$

$$\frac{1}{4} \left(\frac{25}{100} \right) \text{ of } \frac{1}{2} \left(\frac{50}{100} \right) =$$

$$25\% \text{ of } 50\%$$



If multiplying a $\#>1$ by a $\#>1$
the answer will be a $\#>1$.

$$\begin{array}{r} 1.25 \\ \times 1.5 \\ \hline 625 \\ +1250 \\ \hline 1.875 \end{array}$$

If multiplying a $\#<1$ by a $\#<1$
the answer will be a $\#<1$.

$$\begin{array}{r} 0.25 \\ \times 0.5 \\ \hline 0.125 \end{array}$$

If multiplying a $\#<1$ by a $\#>1$
the answer could either be a
 $\#<1$ or a $\#>1$.

$$\begin{array}{r} 5.25 \\ \times 0.5 \\ \hline 2.625 \end{array}$$

$$\begin{array}{r} 1.25 \\ \times 0.5 \\ \hline 0.625 \end{array}$$

Multiplying and Dividing by Powers of Ten

$$\times \frac{1}{10} = \div 10$$

$$\times 0.1 = \div 10$$

$$\times \frac{1}{100} = \div 100$$

$$\times 0.01 = \div 100$$