

# To Multiply Numbers with Decimals

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

$$1.20 \times 4.25$$

Place the longer number on top.

Get rid of pointless zeros.

$$4.25$$

$$\times 1.2$$

$$\underline{850}$$

$$+4,250$$

Remember to place a zero on the second line.

$$\underline{5.100}$$

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

Count again.

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 **of** 0.5

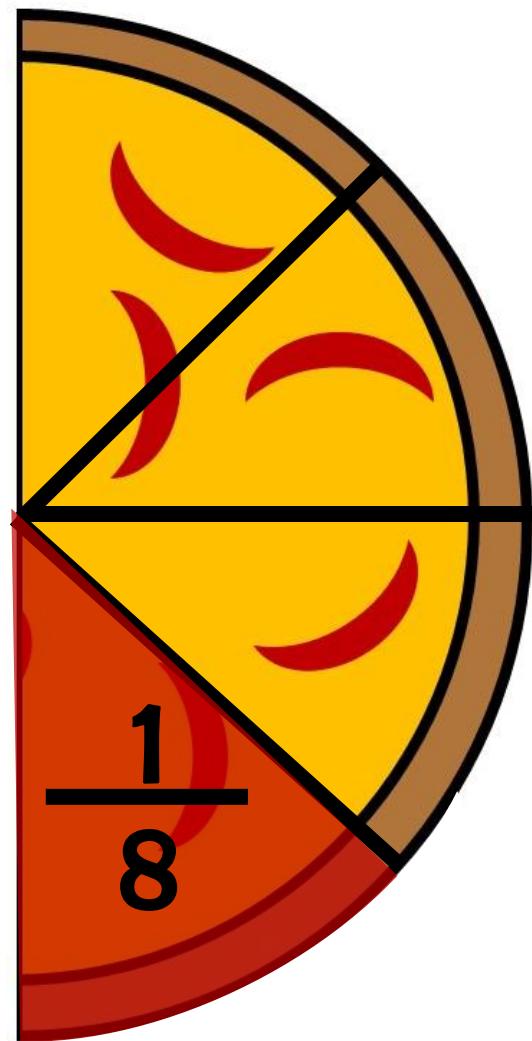
=

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

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

=

25% **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  $\#>1$ .

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

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

# Multiplying and Dividing by Powers of Ten

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

$$\times 0.1 \quad = \quad \div 10$$

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

$$\times 0.01 \quad = \quad \div 100$$