## Long Division

The purpose of division is to determine how many times the divisor fits into the dividend.

Division is the inverse (opposite operation) of multiplication. You can use multiplication to "undo" or check your answer. Multiply the quotient by the divisor and you should get the dividend.


## Example:

| Divide: | $3 \longdiv { 2 \leftarrow }$ | 3 goes into 7 <br> -2 times... <br> with some extra! |
| :---: | :---: | :---: |
| Multiply: | $\frac { \sqrt { 2 } } { 3 } \longdiv { 7 5 }$ | $2 \times 3=6$ |
| Subtract: | $\begin{aligned} & 2 \\ & 3 \longdiv { 7 5 } \\ & -\frac{6}{1} 々 \end{aligned}$ |  |
| Bring Down: | $\begin{gathered} 2 \\ 3 \longdiv { 7 5 } \\ -6 \downarrow \\ \hline 15 \end{gathered}$ |  |
| Repeat: | $\begin{gathered} 25 \\ 3 \longdiv { 7 5 } \\ -\frac{6}{15} \\ \frac{-15}{0} \end{gathered}$ | $\begin{gathered} 15 \div 3=5 \\ 5 \times 3=15 \end{gathered}$ |

## You Try:



