

# Dividing Decimals

\* All numbers have decimals

- The decimal on a whole number is after the far right digit

ex.  $7 \rightarrow 7.0$

$264 \rightarrow 264.0$

Divide Decimal / whole #

$$\begin{array}{r} 11.1 \\ 2 \overline{) 22.2} \\ \underline{-2} \phantom{.2} \\ 02 \phantom{.2} \\ \underline{-2} \phantom{.2} \\ 02 \\ \underline{-2} \\ \underline{\underline{0}} \end{array}$$

answer = 11.1

Divide like normal

## Divide whole number / Decimal

$$1.2 \overline{) 24}$$

$$1.2 \overline{) 24.0}$$

$$\begin{array}{r} 20. \\ 12 \overline{) 240.} \\ \underline{-24} \phantom{0} \\ 00 \\ \underline{-0} \\ 0 \end{array}$$

$$\boxed{\text{answer} = 20}$$

- move the divisor (outside #) decimal point "to the wall"

- move the decimal on the dividend (inside #) to the right the same number of places

- stick decimal straight up into answer

- add a zero to the dividend

- Divide like normal

## Divide Small number / bigger number

$$15 \overline{) 6}$$

$$\begin{array}{r} .4 \\ 15 \overline{) 6.0} \\ \underline{-6} \phantom{0} \\ 0 \end{array}$$

$$\boxed{\text{answer} = .4}$$

- find the decimal at the end of the dividend

- Bring the decimal straight up into the answer

- add a zero to the dividend

- divide like normal

# Divide Decimal by Decimal

$$1.11 \overline{) 33.33}$$

- move decimal in divisor over "to the wall"

$$1.11 \overline{) 33.33} \uparrow$$

- move decimal in dividend the same number of places to the right

$$30.02$$

$$111 \overline{) 3333.00}$$

$$\begin{array}{r} -333 \downarrow \\ \hline \end{array}$$

$$03$$

$$\begin{array}{r} -0 \\ \hline \end{array}$$

$$30$$

$$\begin{array}{r} -0 \downarrow \\ \hline \end{array}$$

$$300$$

$$\begin{array}{r} -222 \\ \hline \end{array}$$

$$78$$

- Bring decimal point from dividend straight up into quotient

- add zeros if necessary to the dividend

- divide like normal

answer = 30.02