

Rules for Division

1. Move the decimal point in the divisor (the number outside the box) to the right to make it a whole number.
2. Move the decimal point in the dividend (the number inside the box) to the right the same number of places.
3. Divide as you would with whole numbers.
4. Move the decimal point into the quotient (your answer) directly above the decimal point you moved in the dividend.

Rules for Division – Example

1. Move the decimal point in the divisor (the number outside the box) to the right to make it a whole number.

$$1.6 \overline{) 5.76}$$

Move the decimal point
one point to the right

Becomes

$$16 \overline{) 57.6}$$

Rules for Division – Example

3. Divide as you would with whole numbers

$$\begin{array}{r} 36 \\ 16 \overline{) 57.6} \\ \underline{- 48} \\ 96 \\ \underline{96} \\ 0 \end{array} \quad \text{Ignore the decimal point for now!}$$

4. Move the decimal point into the quotient (your answer) directly above the decimal point you moved in the dividend.

$$\begin{array}{r} 3.6 \\ 16 \overline{) 57.6} \end{array}$$

Division – Another Example

What happens to the dividend when there are no more numbers to move the decimal place to?

Example 1: $8 \div 1.6$ OR $1.6 \overline{)8}$

Since there is one decimal place in the divisor, we need to move the decimal point in the dividend and the divisor to the right one.

How can we do this?

$$1.6 \overline{)8.0}$$

Remember we can add 0s after the decimal point without changing the value of the number.

Division – Another Example

Now we can solve as usual.

$$1.6 \overline{) 8.0} \quad \text{becomes}$$

$$\begin{array}{r} 5. \\ 16 \overline{) 80.} \\ - 80. \\ \hline 0. \end{array} \quad \text{Which equals 5}$$

Division – Another Example

$$7.15 \div 32.5 \quad \text{or} \quad 32.5 \overline{)7.15}$$

Move the decimal places one place to the right.

$$\begin{array}{r} .22 \\ 325 \overline{)71.5} \\ \underline{-650} \\ 650 \\ \underline{-650} \\ 0 \end{array}$$

Rules for Division - Example

BIG HINT:

Check your answer using just whole numbers to make sure your answer is reasonable and the decimal point is in the correct place.

$$5 / 1 = 5 \quad \text{or}$$

$$6 / 2 = 3 \text{ (if you round to a whole number)}$$

so 3.6 is reasonable

Would **.36** be reasonable?

Would **36** be reasonable?