

Dividing Decimals with Decimals

Nov. 7, 2022

Reminder : $1 \div 4 = \frac{1}{4}$

Equivalent fractions

$$\frac{1}{4} \stackrel{\times 10}{=} \frac{10}{40}$$

Example: $6.42 \div 0.03 = 214$

Dividend \downarrow Divisor \downarrow \swarrow Dividing by decimals is hard

$$= \frac{6.42 \times 10}{0.03 \times 10}$$

$$= \frac{64.2 \times 10}{0.3 \times 10}$$

$$= \frac{642}{3}$$

No more decimal \rightarrow

$$\begin{array}{r} 214 \\ 3 \overline{)642} \\ \underline{-6} \\ 04 \\ \underline{-3} \\ 12 \\ \underline{-12} \\ 0 \end{array}$$

D
M
S
B
R

Hint If you move the decimal place in the divisor, you must move the decimal place in the dividend by the same amount, in the same direction.

Try: $6.75 \div 0.5$

$$67.5 \div 5$$

$$\begin{array}{r} 13.5 \\ 5 \overline{)67.5} \\ \underline{-5} \\ 17 \\ \underline{-15} \\ 25 \\ \underline{-25} \\ 0 \end{array}$$