2.1c MULTIPLYING & DIVIDING DECIMALS. p.49

Note Title 2/7/2017

TO MULT. DECIMALS:

STEP 1: DECIDE ON ANSWER'S SIGN

STEP 2: MULTIPLY THE NUMBERS AS IF THEY HAD NO DECIMALS.

STEP 3: DECIDE ON HOW MANY DECIMAL PLACES THE ANSWER SHOULD HAVE.

ex) $(-1.2)(0.11) = -.132$

STEP ①

STEP ②:

$$\begin{array}{r} 12 \\ \times\ 11 \\ \hline 132 \end{array}$$

STEP ③: ORIGINALLY WE HAD 3 DECIMAL PLACES SO THE ANSWER SHOULD HAVE 3 DEC. PLACES.

ex) $(-0.5)(-1.62) = +0.810$

① ② ③

$$\begin{array}{r} {\scriptstyle 3\ \ 1} \\ 162 \\ \times\ \ 5 \\ \hline 810 \end{array}$$

3 DECIMAL PLACES

ex) $(2.34)(-0.11) = -0.2574$

$$\begin{array}{r} 234 \\ \times\ 11 \\ \hline 234 \\ 2340 \\ \hline 2574 \end{array}$$

TO DIVIDE DECIMALS:

ex) $-1.08 \div 0.8 =$ ☐

DIVIDEND DIVISOR QUOTIENT

STEP 1: DECIDE ON ANSWER'S SIGN

STEP 2: SET UP A LONG DIVISION

$$\text{DIVISOR} \overline{)\ \text{DIVIDEND}}$$

QUOTIENT

STEP 3: "BUMP" OUT THE DIVISOR'S DECIMAL & WHATEVER YOU DID TO THE DIVISOR, YOU HAVE TO DO TO THE DIVIDEND.

STEP 4: COMPLETE LONG DIVISION

ex) $-1.08 \div 0.8 = -1.35$ ①

② $0.8\overline{)1.08}$ ③ $\Rightarrow$ ④

$$\begin{array}{r} 1.35 \\ 8\overline{)10.80} \\ -8\downarrow\downarrow \\ \hline 28 \\ -24 \\ \hline 40 \end{array}$$

ex) $(-0.92) \div (-0.4) = +2.3$ ⑤

$0.4\overline{)0.92} \Rightarrow$

$$\begin{array}{r} 2.3 \\ 4\overline{)9.2} \\ 8\downarrow \\ \hline 12 \end{array}$$

MORE CHALLENGING:

ex) $\square \div \frac{-7}{9} = \frac{-2}{3}$

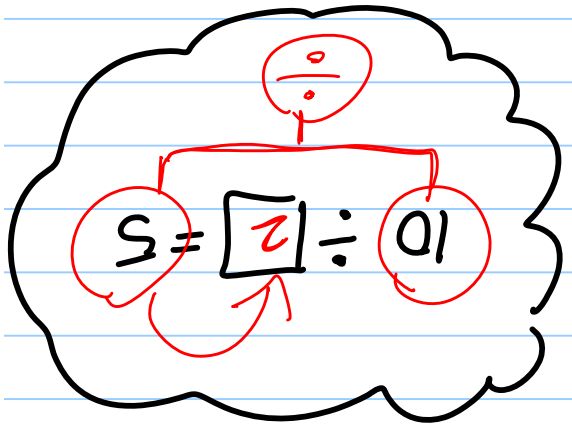
** REMEMBER WHEN YOU GET STUCK, TRY SIMPLIFYING THE QUESTION:

$\square \div 2 = 5$

10 × 2 = 5

$$\left(\frac{-7}{9}\right)\left(\frac{-2}{3}\right) = \square$$

$$\left(\frac{h}{s}-\right)\times\frac{01}{6}=\left(\frac{s}{h}-\right)\div\frac{01}{6}$$



$$\frac{s}{h}-=\square\div\frac{01}{6}$$

$$\square=\frac{6e}{h1+}$$

$$= -\frac{9}{8} \text{ OR } -1\frac{1}{8}$$

ex) $\square \div (-1.7) = 5.6$

$\times$

$\square = (-1.7)(5.6)$

$\square = -9.52$

$$\begin{array}{r} {}^{4\,3} \\ 17 \\ 56 \\ \hline 102 \\ 850 \\ \hline 952 \end{array}$$

THINK:

$\boxed{8} \div 2 = 4$

$\times$

ex) $-1.092 \div \boxed{} = -2.1$

$\div$

THINK:

$8 \div \boxed{4} = 2$

$\div$

$-1.092 \div -2.1 = \boxed{+0.52}$

$$2.1 \overline{)\,1.0.92} \Rightarrow 21 \overline{)\,10.92}$$

$$\begin{array}{r} .52 \\ 21\overline{)\,10.92} \\ 10\ 5\downarrow \\ \hline 42 \end{array}$$