

2.1b MULTIPLYING / DIVIDING FRACTIONS

Note Title

10/5/2017

P. 45

REMEMBER :

$$\begin{aligned} (+)(+) &= (+) \\ (-)(-) &= (+) \end{aligned} \quad \left. \begin{array}{l} \text{IF THE} \\ \text{SIGNS ARE} \\ \text{THE SAME,} \\ \text{THE PRODUCT} \\ \text{IS (+)} \end{array} \right\}$$

$$\begin{aligned} (+)(-) &= (-) \\ (-)(+) &= (-) \end{aligned} \quad \left. \begin{array}{l} \text{IF THE SIGNS} \\ \text{ARE DIFFERENT,} \\ \text{THE PRODUCT} \\ \text{IS (-)} \end{array} \right\}$$

$$ex) \quad \left(\begin{array}{c} 2 \\ -10 \\ 9 \end{array} \right) \left(\begin{array}{c} 2 \\ -18 \\ 5 \end{array} \right) =$$

• REDUCE FIRST

• DECIDE ON THE
ANSWER'S SIGN

- MULT. NUMERATORS
- MULT. DENOMINATORS

$$+ \frac{1}{2 \cdot 2}$$

$$= 4$$

$$ex) \quad \left(\begin{array}{c} -3 \\ 2 \\ -1 \end{array} \right) \left(\begin{array}{c} 2 \\ -14 \\ 15 \end{array} \right)$$

(Handwritten annotations:

- Red circles highlight the numerators -3 and 2.*
- Yellow boxes highlight the denominators 7 and 5.*
- Green boxes highlight the numerators 2 and -14.*
- Red circles highlight the numerators 2 and -14.*
- Yellow boxes highlight the denominators 5 and 15.*

- CONVERT TO
IMPROPER FRACTIONS
- REDUCE

$$- \frac{5}{1} \cdot \frac{2}{1}$$

• DIVIDE ON ANSWERS

SIGN

• MULT. NUM.

• MULT. DEN.

$$= -10$$

To Divide fractions: "KISS & FLIP"

"KISS & FLIP"

• CHANGE TO MULT.

BY "KISS & FLIP"

"KEEP CHANGE FLIP"

• REDUCE

$$\text{ex)} \left(-\frac{4}{5} \right) \div \left(-\frac{6}{10} \right)$$

$$\left(-\frac{4}{5} \right) \times \left(-\frac{10}{6} \right)$$

+ 2.2

—
1.3

• DECIDE ON ANSWER'S

SIGN

"MULT. NUM."

"MULT. DENOM."

$\frac{4}{3}$

"CLEAN UP"

-REDUCE IF NECESSARY

-PROPER FRACTION

$1\frac{1}{3}$

$$\text{ex)} \quad \left(2\frac{3}{4} \right) \div \left(-4\frac{4}{10} \right)$$

• CHANGE TO
IMPROPER
FRACTIONS

$$\frac{11}{4} \div \left(-\frac{44}{10} \right)$$

• "LISS & FLIP"

$$2 \times \left(-\frac{10}{44} \right)$$

• REDUCE

• DECIDE ON
ANSWER'S SIGN

$$-1\frac{5}{4}$$

$$-\frac{5}{4}$$

• MULT. NUM..

• MULT. DENOM.

• "CLEAN-UP"

P. 42 (red) }
P. 46 (black) } #1-9N, #1-10A, #1-15E