

3.4 multiplying rational numbers

Thursday, September 17, 2015 10:02 AM



3.4 Blank notes

MATH 9

3.4 MULTIPLYING RATIONAL NUMBERS NOTES

Name _____

Blk _____

Warm up

Multiply the following

a.) $(-9) \times 4 =$

-36

b.) $(-1) \times (-4) =$

$+4$

c.) $(-3) \times 2 \times (-1) =$

$+6$

d.) $(-1) \times (-1) \times (-1) =$

-1

Strategies?

even number of negative signs (2, 4, 6...) your answer will be positive.

odd number of negative signs (1, 3, 5...) your answer will be negative.

How do you multiply $\frac{1}{2} \times \frac{1}{4}$?

$\left(\frac{1}{8} \right)$

$\frac{1}{2} \times \frac{1}{4} \leftarrow$ multiply numerators

$\frac{1}{2} \times \frac{1}{4} \leftarrow$ multiply denominators

What are the steps to multiplying fractions?

- ① change to improper fraction if mixed
- ② multiply numerators and denom.
- ③ Reduce

Ex1 - Multiply

a) $\frac{3}{2} \times \frac{1}{5} = \frac{3}{10}$

b) $-\frac{3}{2} \times \frac{1}{-5}$

$= -\frac{3}{2} \times -\frac{1}{5}$

$= \frac{3}{10}$

c) $\frac{4}{7} \times (-3)$

$\frac{4}{7} \times -\frac{3}{1}$

$= -\frac{12}{7} = -1\frac{5}{7}$

*Sometimes you can reduce before multiplying

Ex2 - Multiply

a) $\left(\frac{1}{2} \right) \left(-\frac{3}{4} \right) = \left(-\frac{1}{2} \right) \left(-\frac{3}{4} \right)$
 $= \frac{3}{8}$

b) $\left(2\frac{2}{3} \right) \left(-1\frac{3}{4} \right)$
 $= \left(\frac{8}{3} \right) \left(-\frac{7}{4} \right)$
 $= -\frac{14}{3} = -4\frac{2}{3}$

As a decimal

Determine each product

$$\text{a.) } (0.8)(-2.4) = \begin{array}{r} ^3 -2.4 \\ \textcircled{1} 6.8 \\ \hline -192 \end{array}$$

Put decimal
in answer
end.

$$\textcircled{2} \begin{array}{r} -24 \\ \times 8 \\ \hline -192 \end{array}$$

$$\textcircled{3} \frac{8}{10} \times \frac{-24}{10} = \frac{-192}{100} = -1.92$$

Assignment

- ① In class worksheet for marks
- due in class.
- ② p. 127 #4cd, 5ac, 6, 7, 9, 12, 15
- ③ Quiz Thursday 3.1-3.3