Curriculum Outcome

N1: Demonstrate an understanding of rational numbers by: comparing and ordering rational numbers; solving problems that involve arithmetic operations on rational numbers.

Student Friendly:
“Multiplying fractions and decimals "

Sep 7-2:50 PM

Quiz

Sep 17-9:45 PM

Section 3.4
Multiplying Rational Numbers

What rules do we use to multiply integers?

Indicate if the answer will be **negative** or **positive**. How do you know?

(-4) x 3 = -12

(-3) x (-6) = 18

2 x 8 = 16

Nov 1-6:01 PM

$-3 \times 5 = -15$

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

$-a \times -b = +$

Sep 19-10:21 AM

When multiplying **integers**, we use the following rules:

(-) x (+) = (-)

Copy down

(-) x (-) = (+)

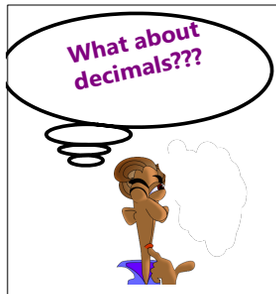
(+) x (+) = (+)

So, when the signs are opposite, the product is negative

and

when the signs are the same, the product is positive!

Nov 1-8:10 PM



When we have decimals use a calculator!

Example 1	Example 2
0.7 x (-1.5)	(-1.45) x (-3.56)
= -1.05	= 5.162

Nov 1-6:22 PM

Now, let's take a look at Fractions.

What rules do we use to multiply fractions?

Evaluate the following expression.

How did you get your answer?

$\frac{6}{5} \times \frac{8}{7} = \frac{6 \times 8}{5 \times 7} = \frac{48}{35}$

Copy Down

When multiplying fractions, ~~we use this rule~~:

Multiply the numerator by the numerator
then
Multiply the denominator by the denominator

Nov 1-6:01 PM

Try these out!

☆ Don't forget to ALWAYS reduce if possible!

Use what you know about multiplying integers & fractions to evaluate the following expressions.

$\left(\frac{7}{-4}\right) \times \frac{9}{2}$	$9 \times (-3)$	$\frac{9}{2} \times \left(\frac{-3}{10}\right)$
$= -\frac{63}{8}$	$= -27$	$= -\frac{27}{20} = -1\frac{7}{20}$
(-1.5) x (-1.8)	0.2 x (-0.4)	$\left(-\frac{8}{3}\right) \times \left(-\frac{6}{5}\right)$

Nov 1-6:12 PM

When we use brackets to write a product,
we do not need the multiplication sign!

We can write

$\frac{3}{2} \times \left(-\frac{1}{5}\right)$ as $\left(\frac{3}{2}\right)\left(-\frac{1}{5}\right)$ as $\left(\frac{3}{2}\right) \cdot \left(\frac{-1}{5}\right)$

AND

$(-1.5) \times 1.8$ as $(-1.5)(1.8)$

$(-1.5) \cdot (1.8)$

Nov 1-6:16 PM

$\frac{4}{5} \times \frac{3}{16} = \frac{12}{80} = \frac{3}{20}$

$\frac{\cancel{4}^{1}}{5} \times \frac{3}{\cancel{16}_{4}} = \frac{1}{5} \times \frac{3}{4} = \frac{3}{20}$

Sep 19-10:28 AM

$\left(\frac{-4}{\cancel{-48}\ 15}\right)\left(\frac{\cancel{35}\ 7}{\cancel{12}\ 1}\right)$ (3)

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

$= \frac{-28}{3}$

$\left(\frac{-48}{15}\right)\left(\frac{35}{12}\right)$

$\frac{-1680}{180}$ ÷60 ÷60

$= \frac{-28}{3}$

Sep 17-9:21 AM

Practice Questions
p. 128-129

Questions

- 5, 7, 9,

Do not just write down answers show work. You don't have to rewrite word problems but for 11, 12 write out the questions (NOT JUST THE ANSWERS)

Nov 1-6:28 PM