**Dividing Rational Numbers**

Placement of Negative Signs in Quotients:

Are the rational numbers$\frac{12}{-4}, \frac{-12}{4}, and -\frac{12}{4} equivalent?$

Let’s solve each: $\frac{12}{-4}= -3; \frac{-12}{4}= -3; and -\frac{12}{4}=-3 $

 (*Yes, all three are equivalent*)

**Quotients of Rational Numbers:**

**Over 5** months, Alec **wrote** **5** checks for a **total** of **$323.75** to pay for his cable TV service. His cable bill is the **same amount each month**. What was the change in Alec bank account each month to pay for cable?

Step(1): Write the equation (wrote 5 checks = $323.75, pay same amt per month)

 $-\frac{323.75}{5}$ \*\*Writing a check is negative (money given away)\*\*

Step(2): Solve the equation

 $-\frac{323.75}{5} = -64.75$ \*Alec spent $64.75 each month for cable TV\*

Note: When dividing using the calculator, you type the numerator in first then the denominator to get your answer (With **negative numbers** type the negative with the numerator value. If the negative is attached to the denominator then type the negative with the denominator)

Ex. $\frac{(-)numerator}{denominator} $

Note: When dividing manually, the numerator is the dividend (first number, negative should be placed with this number in most cases when calculating) and the denominator is the divisor (second number behind the division symbol)

Ex. **(-)numerator ÷ denominator**

**Ex (1): Find the quotient of (-8.3) / (4.89). Round to the nearest tenth.**

$$\frac{-8.3}{4.89} = -1.7 \*Note:Locate the place value for the final answer$$

Note: If one of the numbers being divided is a fraction. Read the entire problem to determine if the answer should be a fraction or decimal.

1. If answer is a **fraction**: ***remember to convert the whole number to an improper fraction, then use the keep change flip rule to solve.***

$$\frac{\left(\frac{1}{2}\right)}{4.2} = \frac{\frac{1}{2}}{\frac{4.2}{1}} = \left(\frac{1}{2}\right) ÷\left(\frac{4.2}{1}\right) = \left(\frac{1}{2}\right) x \left(\frac{1}{4.2}\right) = \frac{1}{8.4} $$

1. If answer is a **decimal**: ***remember to convert the fraction to a decimal, then divide the two decimal numbers to solve.***

$$\frac{\left(5.5\right)}{-\frac{3}{4}} = \frac{5.5}{-0.75} = -7.33$$

CFU:

1. Find the quotient of (15.23) / (-3.4). Round to the nearest tenth.
2. Find the quotient of (-1/6) / (-5.9). Leave the answer as a decimal and round to the nearest hundredth.