Math Chapter 5 Study Guide

Rational number - any number that can be written as a/b, where a and b are integers and b ≠ 0

Here is how to change whole numbers, negative numbers, mixed numbers, and decimals into a **RATIO.**

Example 1 Write each rational number as a ratio $\frac{a}{b}$.

A. $^-6$	B. 15	C. $5\frac{1}{4}$	D. 0.86	E. $^-3\frac{7}{8}$
$^-6 = \frac{^-6}{1}$	$15 = \frac{15}{1}$	$5\frac{1}{4} = \frac{21}{4}$	$0.86 = \frac{86}{100}$	$^-3\frac{7}{8} = \frac{^-31}{8}$

Copy and complete to write the rational number in the form $\frac{a}{b}$.

1. $^-12.3$ $\quad ^-12.3 = \frac{^-12.3}{1} \times \frac{10}{10} = \frac{\blacksquare}{10}$

2. 4.71 $\quad 4.71 = \frac{4.71}{1} \times \frac{100}{100} = \frac{\blacksquare}{100}$

- 123/10 **471/100**

Write the rational number in the form $\frac{a}{b}$.

3. $^-6$ **-6/1**

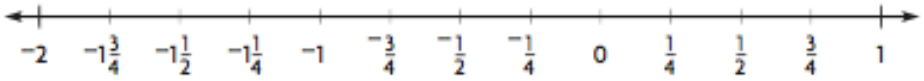
4. $2\frac{4}{5}$ **14/5**

5. $^-0.675$ **-675/100**

6. $3\frac{5}{6}$ **23/6**

7. $^-4\frac{1}{4}$ **- 17/4**

Use the number line to find a rational number between the two given numbers.



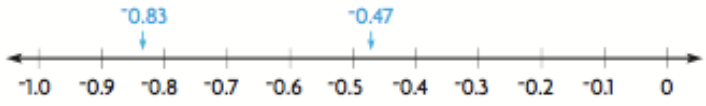
9. $^-1\frac{1}{2}$ and $^-1$ **-1 1/4**

10. 0 and $\frac{1}{2}$ **1/4**

11. $^-2$ and $^-1\frac{1}{2}$ **-1 3/4**

Compare and Order Decimals

Example 1 Compare $^-0.47$ and $^-0.83$.



$^-0.83$ is between $^-0.8$ and $^-0.9$.

$^-0.47$ is between $^-0.4$ and $^-0.5$.

$^-0.83$ is to the left of $^-0.47$, so $^-0.83$ is less than $^-0.47$.

So, $^-0.83 < ^-0.47$ and $^-0.47 > ^-0.83$.

The larger the negative number, the smaller the quantity.

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Compare. Write < or >.

7. $^{-}0.62 \bullet 0.61$ **8.** $2.8 \bullet {}^{-}2.9$

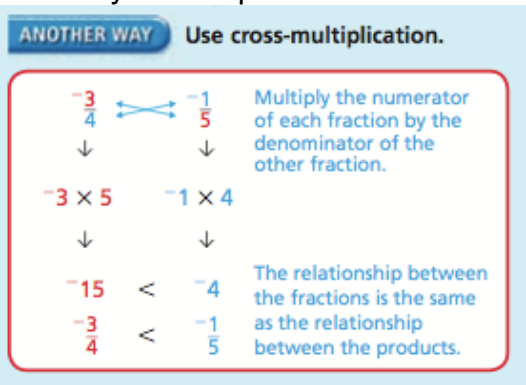
< >

Order from least to greatest.

15. $5.82, {}^{-}0.37, 2.14, {}^{-}0.05$

-0.37 -0.05 2.14 5.82 (Notice that the larger the negative number, the smaller the quantity.)

One way to Compare fractions is to cross multiply.



Use cross multiplying to compare the fractions.

8. $\frac{-3}{8} \bullet \frac{-1}{8}$

<

-3 x 8 = -24

-8 x 1 = -8

Remember the larger the negative number the smaller the quantity.

Compare. Write <, >, or =.

2. $\frac{-3}{4} \bullet {}^{-}2$ **3.** $1.25 \bullet {}^{-}1$ **4.** $^{-}1.5 \bullet {}^{-}1\frac{1}{2}$

-3 ÷ 4 = -.75 < - 2 1.25 > -1 -1.5 = - 3 ÷ 2 = - 1.5