Rational Numbers on a Number Line

When comparing and ordering rational numbers on a number line, it helps to change all of the numbers to fractions and mixed numbers or to decimals.
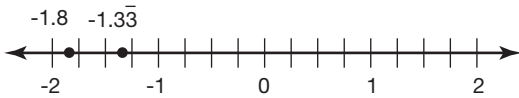
How do you compare rational numbers?

Compare $-1.3\overline{3}$ and $-\frac{9}{5}$.

Convert $-\frac{9}{5}$ to a decimal so that both numbers are in the same form.
$-\frac{9}{5} = -9 \div 5 = -1.8$

Place the numbers on a number line.

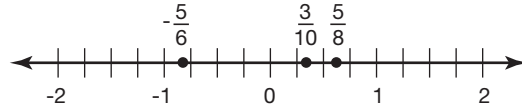$-1.3\overline{3}$ is to the right of -1.8.

So, $-1.3\overline{3} > -9/5$.

How do you order rational numbers?

Order 0.3, $-\frac{5}{6}$ and $\frac{5}{8}$ from least to greatest.

Convert 0.3 to a fraction so that all of the numbers are in the same form.
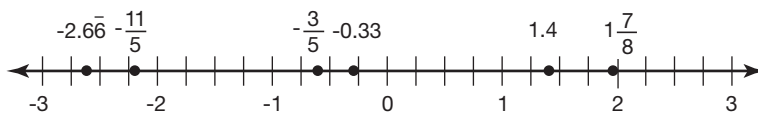
$0.3 = \frac{3}{10}$

Place the numbers on a number line.

$\frac{3}{10}$ is to the right of $-\frac{5}{6}$ and $\frac{5}{8}$ is to the right of 0.3.

So, the numbers in order from least to greatest are $-\frac{5}{6}$, 0.3, $\frac{5}{8}$.

Write $<$ or $>$ in the circle.

1. $-\frac{3}{5}$ $\bigcirc$ -0.33

2. $1\frac{7}{8}$ $\bigcirc$ 1.4

3. $-2.6\overline{6}$ $\bigcirc$ $-\frac{11}{5}$

4. $-2\frac{1}{3}$ $\bigcirc$ -2.8

5. -1.1 $\bigcirc$ $-1\frac{4}{5}$

6. 1.15 $\bigcirc$ $\frac{11}{8}$

Write the numbers in order from least to greatest.

7. $0.15, -\frac{2}{3}, -0.1$

8. $-\frac{11}{5}, -2.5, -2\frac{2}{3}$

9. $1.6, \frac{15}{8}, 1\frac{2}{5}$

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10. Reasoning The rainfall in a city was $-\frac{3}{8}$ in. below average in June and -0.45 in. below average in July. Which month is closest to the average?

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