Lesson 5
I Can Compare and Order Rational Numbers

You can use a ______________ to compare and order rational numbers.
A number is greater than another number if it is to the ____________ of it.

Example 1
Compare – 2.2 _______ 1.4 <, >, or = to make a true statement.

- Graph the decimals on a number line.

- The symbol opens to the bigger number

– 2.2 _______ 1.4

Example 2
Fill in ___ in – \( \frac{4}{5} \) _______ \( \frac{2}{3} \) with <, >, or = to make a true statement.

- Write the fractions as a decimal

\[
\frac{4}{5} = \quad \frac{2}{3} =
\]

- Draw a number line

Example 3
Fill in ___ in –0.91 _______ \( \frac{7}{8} \) with <, >, or = to make a true statement.

Rename \( \frac{7}{8} \) as a decimal:

\[
\leftarrow \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \leftarrow
\]

–0.91 _______ \( \frac{7}{8} \)
Exercises
Fill in \( \bigcirc \) with <, >, or = to make a true statement.

1. \(-8.6 \bigcirc -8.64\)

\[ -8.6 \bigcirc -8.64 \]

2. \(-\frac{3}{7} \bigcirc -\frac{2}{7}\)

\[ -\frac{3}{7} \bigcirc -\frac{2}{7} \]

3. \(-\frac{3}{11} \bigcirc -\frac{8}{11}\)

\[ -\frac{3}{11} \bigcirc -\frac{8}{11} \]

4. \(-12.32 \bigcirc -12 \frac{8}{25}\)

\[ -12.32 \bigcirc -12 \frac{8}{25} \]

5. \(-\frac{3}{4} \bigcirc -\frac{1}{2}\)

\[ -\frac{3}{4} \bigcirc -\frac{1}{2} \]

6. \(-\frac{4}{9} \bigcirc -\frac{5}{6}\)

\[ -\frac{4}{9} \bigcirc -\frac{5}{6} \]
Lesson 5 Homework Practice

Compare and Order Rational Numbers

Fill in \( \_ \) with <, >, or = to make a true statement.

1. \(-\frac{4}{25} \quad \_ \quad -4.12\)

2. \(7.6 \quad \_ \quad -8.5\)

3. \(\frac{8}{11} \quad \_ \quad -\frac{1}{3}\)

4. \(-\frac{7}{9} \quad \_ \quad -\frac{5}{8}\)

5. \(-3.72 \quad \_ \quad -3\frac{9}{10}\)

6. \(-\frac{6}{7} \quad \_ \quad -6.7\)
Lesson 5

I Can Compare and Order Rational Numbers

You can use a number line to compare and order rational numbers. A number is greater than another number if it is to the right of it.

Example 1
Fill in the in –2.2 ___ 1.4 with <, >, or = to make a true statement.

Graph the decimals on a number line.

Since –2.2 is to the left of 1.4, –2.2 < 1.4.

Example 2
Fill in the in –\( \frac{4}{5} \) ___ –\( \frac{2}{3} \) with <, >, or = to make a true statement.

Rename the fractions using the least common denominator.

\[
\begin{align*}
-\frac{4}{5} &= \frac{-4 \times 3}{5 \times 3} = -\frac{12}{15} \\
-\frac{2}{3} &= \frac{-2 \times 5}{3 \times 5} = -\frac{10}{15}
\end{align*}
\]

Since –12 is less than –10, \( -\frac{12}{15} < -\frac{10}{15} \), and \( -\frac{4}{5} < -\frac{2}{3} \).

Example 3
Fill in the in –0.91 ___ –\( \frac{7}{8} \) with <, >, or = to make a true statement.

Rename –\( \frac{7}{8} \) as a decimal.

\[
-\frac{7}{8} = -0.875
\]

–0.91 < –0.875 because –0.91 is to the left of –0.875 on a number line.

So, –0.91 < –\( \frac{7}{8} \).