

1.1 Introduction to Rational Numbers
(part 1)

Name: Ms. B
Date: Feb. 5

Learning Goal: I will learn to

- compare rational numbers

→ A rational number is a number that can be expressed as a fraction.

For example:

$\frac{12}{25}$ $\frac{1}{3}$ 7 $\frac{5}{0}$
 -3 $-0.5 = -\frac{1}{2}$

$4.5 = 4\frac{1}{2} = \frac{9}{2}$ 0.729

Not all decimals are rational!
 $\pi = 3.14159\dots$
NOT RATIONAL
 (never ends, never repeats)

Example: Ordering Rational Numbers

Which rational number is greater, $\frac{7}{16}$ or $\frac{5}{8}$?

Method 1:
Use a Common Denominator

$\frac{7}{16}$ OR $\frac{5 \times 2}{8 \times 2}$
 $\frac{7}{16} < \frac{10}{16}$
 $\frac{5}{8}$ is bigger

Method 2:
Convert Fractions to Decimals

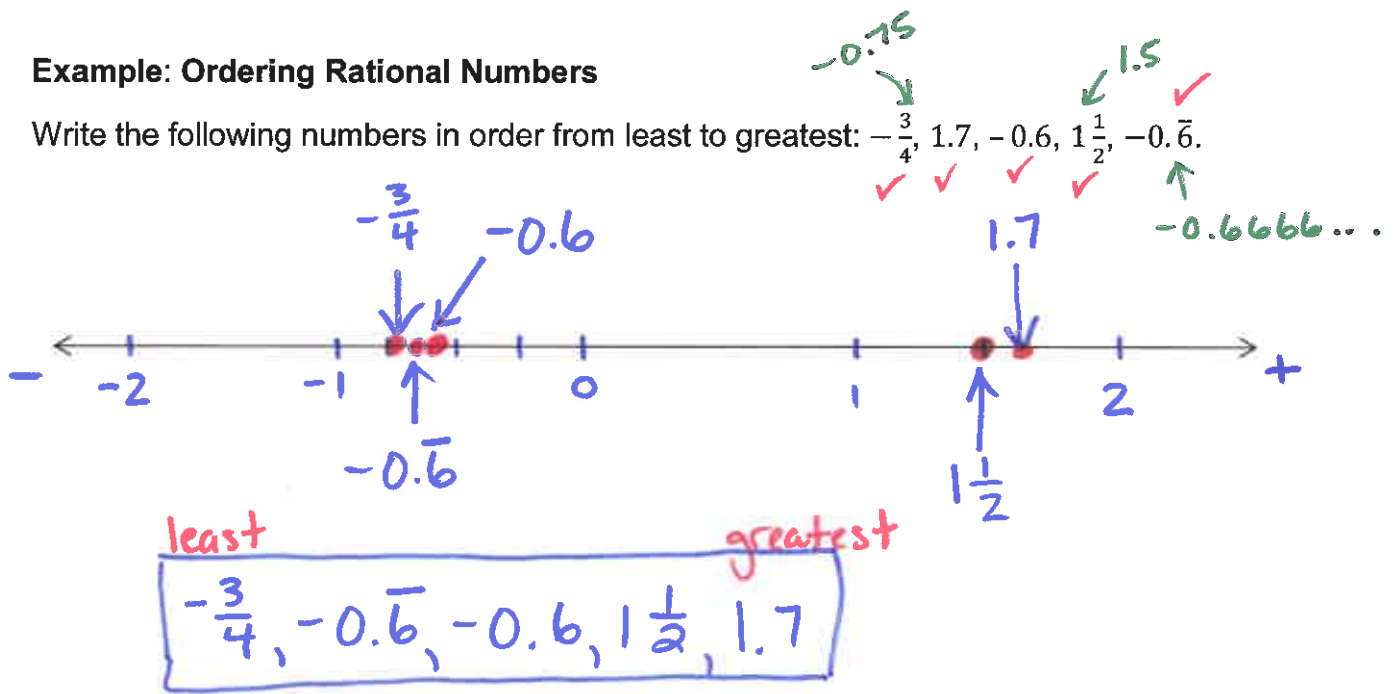
$\frac{7}{16}$ OR $\frac{5}{8}$
 $7 \div 16 = 0.4375$ $5 \div 8 = 0.625$
 $0.4375 < 0.625$
 $\frac{5}{8}$ is bigger

Method 3:
Use a Benchmark

$\frac{1}{2}$
 $\frac{7}{16}$ OR $\frac{5}{8}$
 $\frac{7}{16}$ less than $\frac{1}{2}$ $\frac{5}{8}$ more than $\frac{1}{2}$
 $\frac{5}{8}$ is greater

Example: Ordering Rational Numbers

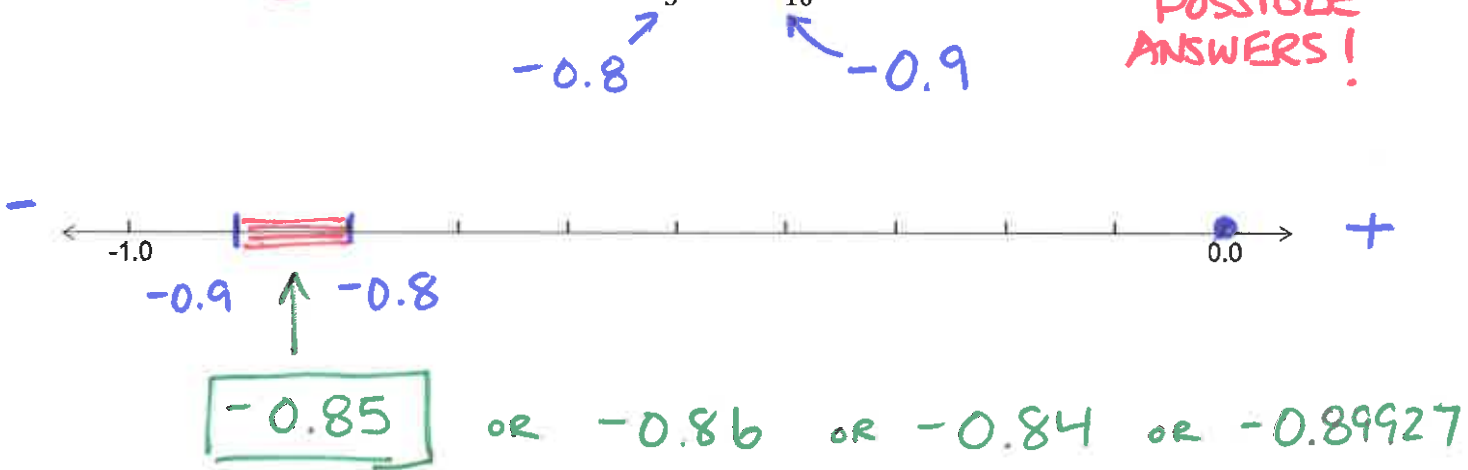
Write the following numbers in order from least to greatest: $-\frac{3}{4}$, 1.7 , -0.6 , $1\frac{1}{2}$, $-0.\bar{6}$.



Example: Identify a Rational Number Between Two Given Rational Numbers

a) Identify a decimal number between $-\frac{4}{5}$ and $-\frac{9}{10}$

*** MANY POSSIBLE ANSWERS!**



b) Identify a fraction between -2.4 and -2.5

$-2.45 = -2\frac{45}{100} \div 5$
 $= -2\frac{9}{20}$ or $-2\frac{23}{50}$ (-2.46)

*** MANY POSSIBLE ANSWERS**