

Curriculum Outcome

N1: Demonstrate an understanding of rational numbers by: comparing and ordering rational numbers; solving problems that involve arithmetic operations on rational numbers.

Student Friendly:

How to identify and write rational numbers



Warm Up

Place checkmarks in each number system that the number belongs to.

Exercise

Complete the table

| | N | W | I | Q | \bar{Q} | R |
|---------------|---|---|---|---|-----------|---|
| 5 | ✓ | ✓ | ✓ | ✓ | | ✓ |
| -2 | | | ✓ | ✓ | | ✓ |
| $\frac{3}{4}$ | | | | ✓ | | ✓ |
| -1.3 | | | | ✓ | | ✓ |
| $\sqrt{5}$ | | | | | ✓ | ✓ |
| $0.\bar{3}$ | | | | ✓ | | ✓ |
| $\sqrt{9}$ | ✓ | ✓ | ✓ | ✓ | | ✓ |
| 0 | | ✓ | ✓ | ✓ | | ✓ |

Warm Up



TRUE or FALSE:

1. ALL integers are rational numbers. **T**
2. ALL natural numbers are whole numbers. **F**
3. ALL rational numbers are natural numbers. **F**
4. ALL integers are irrational numbers. **F**

Arrange the numbers from least to greatest.



$$-\frac{3}{8}, \frac{5}{9}, -\frac{10}{4}, -1\frac{1}{4}, \frac{7}{10}, \frac{8}{3}$$

Arrange the numbers from least to greatest.

$$-\frac{3}{8}, \frac{5}{9}, -\frac{10}{4}, -1\frac{1}{4}, \frac{7}{10}, \frac{8}{3}$$

Change the numbers to decimals!

$$-0.375, 0.555..., -2.5, -1.25, 0.7, 2.666...$$



Least...



| |
|----------|
| -2.5 |
| -1.25 |
| -0.375 |
| 0.555... |
| 0.7 |
| 2.666... |

...Greatest

$$-\frac{10}{4}, -1\frac{1}{4}, -\frac{3}{8}, \frac{5}{9}, \frac{7}{10}, \frac{8}{3}$$

What numbers
are between
 $\frac{3}{4}$ and 0.4 ?



There are
two ways!

1. Change the fractions to decimals.

$$0.4 \quad \frac{3}{4}$$

$$0.4 \quad 0.75$$

See fractions
and decimals

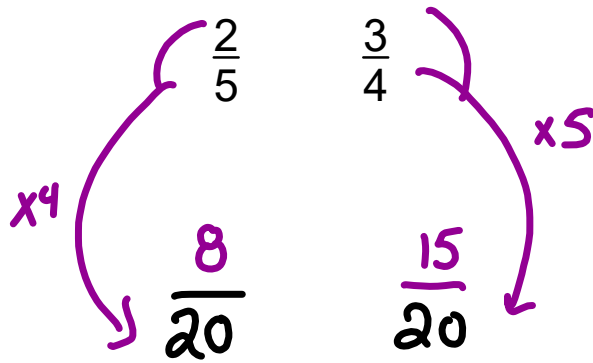
What numbers
are between
 $\frac{3}{4}$ and $\frac{2}{5}$?



There are
two ways!

If we see just
fraction
we must work
with
fractions

Write the fractions with common a
denominator.



$$\frac{9}{20}, \frac{10}{20}, \frac{11}{20}$$

Which rational number is larger??

(Decimals may be used on this side.)

$\frac{12}{15}$ $\frac{13}{16}$
 0.8 0.8125
 <math>0.8 < 0.8125</math>
 Bigger

(NO Decimals please!!)

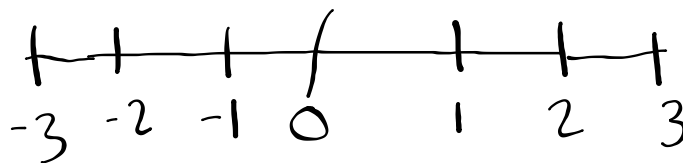
$\frac{2}{3}$ $\frac{3}{4}$
 $\times 4 \left(\frac{8}{12} \right)$ $\left(\frac{9}{12} \right) \times 3$
 $\frac{8}{12}$ $\frac{9}{12}$
 <math>\frac{8}{12} < \frac{9}{12}</math>
 Bigger

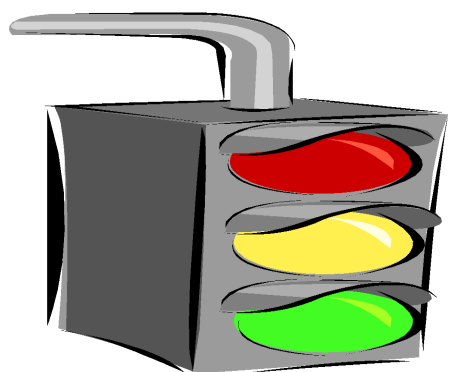
Show your work!

Be careful with negative numbers:

$-1 > -3$
 more positive

$-0.5 > -0.75$
 more positive





Note:

If the questions have ONLY fractions in them than you must have fractional answers. If the questions have decimal and fractions, then your answer can either be in decimal for of fraction form

Class/Homework

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Questions:

5, 6, 7, 12aceh. 13,
14aceg, 16bf, 17ac,
21, 23ad, 24ac