B: Comparing and Ordering Fractions - Continued

Examples:

1. Identify a <u>decimal</u> number between the following:

a) $\frac{4}{5}$, $\frac{5}{6}$

$= 0.8$, $0.8\overline{3}$ Convert each to a decimal

$= \boxed{0.81}$ Choose a decimal that falls between the two.

OTHER Possibilities:

0.82, 0.83, 0.811, 0.812 There are <u>many</u> different answers. Anything between the decimals work.

etc.

b) $\frac{-18}{23}$, $-\frac{5}{6}$

$= -0.78261$, $-0.8\overline{3}$

$= \boxed{-0.79}$

OTHER Possibilities:

-0.80, -0.81, -0.78262

-0.78263 etc.

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2. Identify a <u>fraction</u> between the following:

a) 0.4 , 0.5

$= 0.45$ Choose a decimal between the two given.

$= \frac{45}{100}$ Put the decimal "over" 100, 1000, etc. # of decimal places = # of zeroes.

$= \frac{45 \div 5}{100 \div 5}$ Reduce if you can.

$= \boxed{\frac{9}{20}}$

⭐ Fraction answers should always be in lowest reduced terms.

b) $-0.63, -0.64$

$= -0.635$

$= -\frac{635}{1000}$

$= -\frac{635 \div 5}{1000 \div 5}$

$= \boxed{-\frac{127}{200}}$

2. Continued

- There are many possible answers to this question.

3. Use a rational number to represent the following:

a) a temperature decrease of 4.6°C

decrease means negative so:

-4.6°C

b) 16 m above sea level.

above means positive so:

+ 16 m

Fraction Terminology

$$\frac{-5}{6} \begin{array}{l} \leftarrow \text{numerator} \\ \leftarrow \text{denominator.} \end{array}$$

Examples:

4. Give a fraction in lowest terms that satisfies the following:

- between 0 and -1 with the denominator less than the numerator.

denominator smaller than numerator.

$$\frac{}{10} \quad \text{choose the denominator}$$

$$\frac{11}{10} \quad \text{go up by 1 for the numerator.}$$

→

$-\dfrac{11}{10}$ Add the negative sign.

-1.1 Determine the decimal and make sure it is in between 0 and -1

$\boxed{\dfrac{-11}{10}}$ Identify your answer.

There are many different answers.

5. Find x.

a) $\dfrac{8}{-10} = \dfrac{x}{-20}$

$\dfrac{8}{-10} \bcancel{\times} \dfrac{x}{-20}$ Cross Multiply starting with x.

$(x)(-10) = 8(-20)$

$-10x = -160$

$\dfrac{-10x}{+10} = \dfrac{+160}{+10}$ Divide the # in front of x to cancel. Include the sign

$\boxed{x = 16}$ Solve and circle your answer.

b) $\dfrac{-12}{-10} = \dfrac{60}{x}$

$\dfrac{-12}{-10} \bcancel{\times} \dfrac{60}{x}$

$(x)(-12) = (-10)(60)$

$-12x = -600$

$\dfrac{+12x}{+12} = \dfrac{-600}{-12}$

$\boxed{x = 50}$

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