Comparing and Ordering Fractions

FREE Worksheet - 5

Time: 20 minutes

(Detailed solutions at the end)

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1. Mrs. Hughes had 2 ribbons of the same length.

   She cuts $\frac{3}{5}$ of one of the ribbons for Aryanna and

   $\frac{4}{6}$ of the other ribbon for Donna.

   Who got the bigger piece?

   Answer: _____

2. Arrange the following fractions in order, beginning with the smallest.

   $\frac{1}{4}, \frac{1}{8}, \frac{2}{6}$

   Answer: _____

3. Fill in the blank: (greater than, less than or equal to)

   $\frac{3}{7}$ is _____ $\frac{3}{8}$

4. Which is greater: $\frac{2}{6}$ or $\frac{2}{10}$?

Answer: _____

5. Study the following figure. Is the shaded fraction greater than $\frac{1}{2}$?

Answer: _____

6. Marvin, Aisha and Stephanie each had a similar cake.

Marvin ate $\frac{2}{6}$ of his cake.

Aisha ate $\frac{2}{3}$ of her cake.

Stephanie ate $\frac{2}{8}$ of her cake.

Is the following statement true or false?

Marvin ate a bigger portion than Stephanie.

Answer: _____

7. Which is smaller: $\frac{2}{6}$ or $\frac{4}{6}$?

Answer: _____

Is the following statement true or false?

Sophie ate a smaller portion than Cynthia.

Answer: _____

8. Fill in the blank: (greater than, less than or equal to)

$\frac{5}{10}$ is _____ $\frac{5}{9}$

SOLUTIONS

Problem 1

To compare the two fractions, we must first express the fractions using a common denominator.

Aryanna: $\frac{3}{5} = \frac{6}{10} = \frac{9}{15} = \frac{12}{20} = \frac{15}{25} = \frac{18}{30}$

Donna: $\frac{4}{6} = \frac{8}{12} = \frac{12}{18} = \frac{16}{24} = \frac{20}{30}$

$\frac{20}{30}$ is greater than $\frac{18}{30}$

So, Donna got the bigger piece.

Problem 2

To compare the two fractions, we must first express them using a common denominator.

Fraction 1: $\frac{1}{4} = \frac{6}{24}$

Fraction 2: $\frac{1}{8} = \frac{3}{24}$

Fraction 3: $\frac{2}{6} = \frac{8}{24}$

The fraction with the smallest numerator is the smallest fraction while the fraction with the biggest numerator is the biggest fraction.

So, beginning with the smallest, the fractions should be arranged in the following order:

$\frac{1}{8}, \frac{1}{4}, \frac{2}{6}$

Problem 3

To compare the two fractions, we must first express the fractions using a common denominator.

Fraction 1: $\frac{3}{7} = \frac{6}{14} = \frac{9}{21} = \frac{12}{28} = \frac{15}{35} = \frac{18}{42} = \frac{21}{49} = \frac{24}{56}$

Fraction 2: $\frac{1}{8} = \frac{2}{16} = \frac{3}{24} = \frac{4}{32} = \frac{5}{40} = \frac{6}{48} = \frac{7}{56}$

$\frac{24}{56}$ is greater than $\frac{7}{56}$.

So, $\frac{3}{7}$ is greater than $\frac{1}{8}$.

Problem 4

To compare the two fractions, we must first express them using a common denominator.

Fraction 1: $\frac{2}{6}=\frac{4}{12}=\frac{6}{18}=\frac{8}{24}=\frac{10}{30}$

Fraction 2: $\frac{2}{10}=\frac{4}{20}=\frac{6}{30}$

$\frac{10}{30}$ is greater than $\frac{5}{30}$.

So, $\frac{2}{6}$ is greater than $\frac{2}{10}$.

Problem 5

The shaded portion of the figure represents the fraction $\frac{3}{8}$

To compare the fractions, we must first list the equivalent fractions of $\frac{1}{2}$

$\frac{1}{2}=\frac{2}{4}=\frac{4}{8}$

$\frac{3}{8}$ is less than $\frac{4}{8}$

So, the statement is ***False.***

Problem 6

To compare the fractions, we must first express the fractions with the same denominator by making a list of equivalent fractions.

Marvin: $\frac{2}{6}=\frac{4}{12}=\frac{6}{18}=\frac{8}{24}$

Stephanie: $\frac{2}{8}=\frac{4}{16}=\frac{6}{24}$

$\frac{8}{24}$ is greater than $\frac{6}{24}$.

So, the statement, Marvin ate a bigger portion than Stephanie, is ***True***.

Problem 7

The fractions $\frac{2}{6}$ and $\frac{6}{6}$ have a common denominator.

The smaller fraction is the one with the smaller numerator.

So, $\frac{2}{6}$ is the smaller fraction.

Problem 8

If the numerator of the fractions are same then the one with greater denominator is smaller fraction

So, $\frac{5}{10}$ is smaller than $\frac{5}{9}$.