Comparing and Ordering Fractions

FREE Worksheet - 3

Time: 20 minutes

(Detailed solutions at the end)

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1. Devin, Faith and Nathalie each had a similar cake.

   Devin ate $\frac{3}{6}$ of his cake.

   Faith ate $\frac{3}{8}$ of her cake.

   Nathalie ate $\frac{1}{3}$ of her cake.

   Is the following statement true or false?

   Devin ate a bigger portion than Nathalie.

   Answer: _____

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

   $\frac{4}{6}$ is _____ $\frac{20}{30}$

3. Which is greater: $\frac{1}{3}$ or $\frac{4}{7}$?

   Answer: _____

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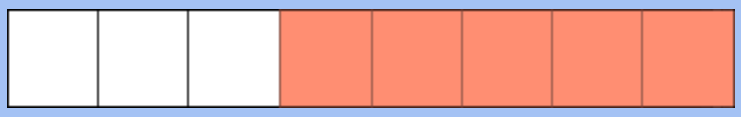
4. Study the following figure. Is the shaded fraction greater than $\frac{1}{2}$?



Answer: _____

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

$\frac{1}{2}, \frac{1}{4}, \frac{1}{3}$

Answer: _____

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

$\frac{7}{9}$ is _____ $\frac{3}{10}$

7. Mrs. Lau had 2 ribbons of the same length.

   She cuts $\frac{4}{5}$ of one of the ribbons for Ruth and

   $\frac{1}{3}$ of the other ribbon for Joaquin.

   Who got the bigger piece?

   Answer: _____

8. Which is smaller: $\frac{2}{4}$ or $\frac{1}{4}$?

   Answer: _____

SOLUTIONS

Problem 1

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

Devin: $\frac{3}{6}$

Nathalie: $\frac{1}{3} = \frac{2}{6}$

$\frac{3}{6}$ is greater than $\frac{2}{6}$

So, the statement, Devin ate a bigger portion than Nathalie, is ***True***.

Problem 2

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

Fraction 1:

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

Fraction 2:

$$\frac{20}{30}$$

From the above we see that $\frac{4}{6}$ is equal to $\frac{20}{30}$

Problem 3

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

Fraction 1:

$$\frac{1}{3} = \frac{2}{6} = \frac{3}{9} = \frac{4}{12} = \frac{5}{15} = \frac{6}{18} = \frac{7}{21}$$

Fraction 2:

$$\frac{4}{7} = \frac{8}{14} = \frac{12}{21}$$

$\frac{12}{21}$ is greater than $\frac{7}{21}$

So, $\frac{4}{7}$ is ***greater than*** $\frac{1}{3}$

Problem 4

The shaded portion of the figure represents the fraction $\frac{5}{8}$

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

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

$\frac{5}{8}$ is ***greater than*** $\frac{4}{8}$

So, the statement is True.

Problem 5

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

Fraction 1:

$$\frac{1}{2} = \frac{6}{12}$$

Fraction 2:

$$\frac{1}{4} = \frac{3}{12}$$

Fraction 3:

$$\frac{1}{3} = \frac{4}{12}$$

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:

$$\frac{1}{4}, \frac{1}{3}, \frac{1}{2}$$

Problem 6

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

Fraction 1:

$$\frac{7}{9}=\frac{14}{18}=\frac{21}{27}=\frac{28}{36}=\frac{35}{45}=\frac{42}{54}=\frac{49}{63}=\frac{56}{72}=\frac{63}{81}=\frac{70}{90}$$

Fraction 2:

$$\frac{3}{10}=\frac{6}{20}=\frac{9}{30}=\frac{12}{40}=\frac{15}{50}=\frac{18}{60}=\frac{21}{70}=\frac{24}{80}=\frac{27}{90}$$

$\frac{70}{90}$ is greater than $\frac{27}{90}$

So, $\frac{7}{9}$ is ***greater than*** $\frac{3}{10}$

Problem 7

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

Ruth: $\frac{4}{5}=\frac{8}{10}=\frac{12}{15}$

Joaquin: $\frac{1}{3}=\frac{2}{6}=\frac{3}{9}=\frac{4}{12}=\frac{5}{15}$

$\frac{12}{15}$ is greater than $\frac{5}{15}$.

So, Ruth got the bigger piece.

Problem 8

The fractions $\frac{2}{4}$ and $\frac{1}{4}$ have a common denominator.

The smaller fraction is the one with the smaller numerator.

So, $\frac{1}{4}$ is the smaller fraction.