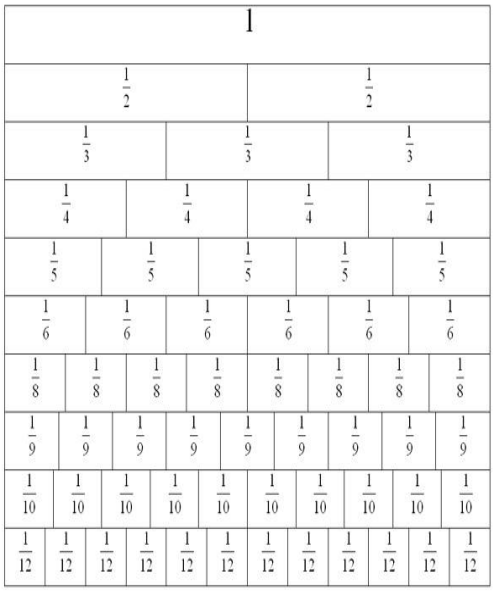
Q3C1 Fractions Study Guide Name _____ Test Date: _____

Standards:

MGSE4.NF.1 explain why a fraction a/b is equivalent to a fraction (n x a/n x b) by using visual fraction models with attention to how the number and size of the parts differ even though the two fractions themselves are the same size; use this principle to recognize and generate equivalent fractions

MGSE4.NF.2 Compare two fractions with different numerators and different denominators, e.g., by creating common denominators or numerators, or by comparing to a benchmark fraction such as 1/2. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with symbols >, =, or <, and justify the conclusions, e.g., by using a visual fraction model.



1. Write an equivalent fraction for each of the following:

   a. $\frac{2}{3}$

   b. $\frac{1}{3}$

   c. $\frac{1}{2}$

   d. $\frac{3}{5}$

2. Write each set of fractions as a pair of fractions with common denominators.

   A. $\frac{1}{2} and \frac{2}{3}$

   B. $\frac{1}{4} and \frac{2}{6}$

   C. $\frac{3}{5} and \frac{3}{10}$

   D. $\frac{3}{4} and \frac{5}{6}$

3. Which of the following is NOT an equivalent fraction to $\frac{1}{2}$?

   A. $\frac{6}{12}$ B. $\frac{4}{8}$ C. $\frac{5}{10}$ D. $\frac{2}{3}$

4. Use <, =, or > to compare.

   $\frac{4}{8}$ _____ $\frac{2}{4}$ $\frac{2}{12}$ _____ $\frac{3}{6}$

   $\frac{3}{4}$ _____ $\frac{3}{5}$ $\frac{1}{8}$ _____ $\frac{1}{4}$

5. Which fraction is larger $\frac{4}{10}$ or $\frac{1}{2}$? Explain your answer.

6. Organize the fractions in the correct column.

$\frac{4}{8}$ $\frac{3}{8}$ $\frac{8}{12}$ $\frac{5}{10}$ $\frac{2}{4}$ $\frac{9}{10}$ $\frac{4}{12}$ $\frac{7}{8}$ $\frac{3}{6}$ $\frac{1}{6}$ $\frac{3}{4}$ $\frac{3}{12}$

Less than ½	**Equivalent to ½**	**Greater than ½**

Answer key-

1. Write an equivalent fraction for each of the following:

   a. $\frac{2}{3}$ possible answers: 2/3 x 2/2 = 4/6 2/3 x 3/3 = 6/9

   b. $\frac{1}{3}$ possible answers: 1/3 x 2/2 = 2/6 1/3 x 3/3 = 3/9

   c. $\frac{1}{2}$ possible answers: ½ x 2/2 = 2/4 ½ x 3/3 = 3/6

   d. $\frac{3}{5}$ possible 3/5 x 2/2 = 6/10 3/5 x 3/3 = 9/15

2. Write each set of fractions as a pair of fractions with common denominators. Students need to find the least common multiple or multiply both denominators to find common denominators.

   A. $\frac{1}{2} and \frac{2}{3}$ ½ x 3/3 = 3/6 2/3 x 2/2 = 4/6

   B. $\frac{1}{4} and \frac{2}{6}$ ¼ x 3/3 = 3/12 2/6 x 2/2 = 4/12

   C. $\frac{3}{5} and \frac{3}{10}$ 3/5 x 2/2 = 6/10 3/10

   D. $\frac{3}{4} and \frac{5}{6}$ ¾ x 3/3 = 9/12 5/6 x 2/2 = 10/12

3. Which of the following is NOT an equivalent fraction for $\frac{1}{2}$?

   A. $\frac{6}{12}$ B. $\frac{4}{8}$ C. $\frac{5}{10}$ D. $\frac{2}{3}$

4. Use <, >, or = to compare.

$\frac{4}{8} = \frac{2}{4}$ $\frac{2}{12} < \frac{3}{6}$

$\frac{3}{4} > \frac{3}{5}$ $\frac{1}{8} < \frac{1}{4}$

5. Which fraction is larger $\frac{4}{10}$ or $\frac{1}{2}$? Explain your answer.

4/10 is 1/10 away from being 5/10 which is equivalent to ½. So, ½ is larger than 4/10.

6. Sort the fractions in the correct column using ½ as a benchmark.

$\frac{4}{8}$ $\frac{3}{8}$ $\frac{8}{12}$ $\frac{5}{10}$ $\frac{2}{4}$ $\frac{9}{10}$ $\frac{4}{12}$ $\frac{7}{8}$ $\frac{3}{6}$ $\frac{1}{6}$ $\frac{3}{4}$ $\frac{3}{12}$

Less than ½	Equivalent to ½	Greater than ½
$\frac{3}{8}$ $\frac{4}{12}$ $\frac{1}{6}$ $\frac{3}{12}$	$\frac{4}{8}$ $\frac{5}{10}$ $\frac{2}{4}$ $\frac{3}{6}$	$\frac{8}{12}$ $\frac{9}{10}$ $\frac{7}{8}$ $\frac{3}{4}$