

Name: \_\_\_\_\_

Ms. Napolitano

Date: \_\_\_\_\_

Activity #: \_\_\_\_\_

**I can** use the least common denominator to determine an equivalent fraction.

CCSS: 6.NS.4

## HOMWORK: DAY 1\_WEEK 9

### LCM & GCF

**1** Two grasshoppers are hopping up the stairs. Gary starts at the bottom and hops up 3 stairs at a time. First he lands on step 3, then step 6, and so on. Grace starts at the bottom and hops up 4 stairs at a time. First she lands on step 4, then step 8, and so on.



**a** The staircase has 24 steps. On which steps will both grasshoppers land? Use labeled sketches, numbers, and/or words to solve the problem. Show your work.

Both grasshoppers will land on steps \_\_\_\_\_.

**b** What is the first step on which both grasshoppers will land? \_\_\_\_\_  
This is the least common multiple of 3 and 4.

**2** Find the least common multiple (LCM) of each pair of numbers.

<b>ex.</b> 6 and 8 6, 12, 18, 24 8, 16, 24 24 is the LCM of 6 and 8	<b>a</b> 4 and 9	<b>b</b> 5 and 8	<b>c</b> 6 and 14
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**3** Circle the fraction you think is greater in each pair. Then find out for sure by rewriting the fractions so they have common denominators. Hint: Use the information from problem 2 to help. Put a star by the fraction that turns out to be greater.

<b>ex.</b> $\frac{5}{6}$ ☆ $\frac{6}{8}$ $\frac{5 \times 4}{6 \times 4} = \frac{20}{24}$ $\frac{6 \times 3}{8 \times 3} = \frac{18}{24}$	<b>a</b> $\frac{3}{4}$ $\frac{7}{9}$	<b>b</b> $\frac{2}{5}$ $\frac{3}{8}$	<b>c</b> $\frac{4}{6}$ $\frac{9}{14}$
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**4** You can use the greatest common factor (GCF) to help simplify fractions.

Find the greatest common factor of each pair of numbers.

<b>ex.</b> 12 and 24 Factors of 12 are 1, 2, 3, 4, 6, 12 Factors of 24 are 1, 2, 3, 4, 6, 8, 12, 24 12 is the GCF of 12 and 24	<b>a</b> 8 and 20
<b>b</b> 12 and 18	<b>c</b> 10 and 15

**5** Use your answers from problem 4 to simplify these fractions.

<b>ex.</b> $\frac{12 \div 12}{24 \div 12} = \frac{1}{2}$ $\frac{12}{24} = \frac{1}{2}$	<b>a</b> $\frac{8}{20}$
<b>b</b> $\frac{12}{18}$	<b>c</b> $\frac{10}{15}$

**6** Ebony got  $\frac{3}{4}$  of a yard of red ribbon and  $\frac{10}{12}$  of a yard of purple ribbon. Which piece of ribbon was longer? Exactly what fraction of a yard longer was it? Use numbers, words, and/or labeled sketches to solve this problem. Make sure your answer is in simplest form.

The \_\_\_\_\_ piece of ribbon was exactly \_\_\_\_\_ of a yard longer than the \_\_\_\_\_ piece of ribbon.