

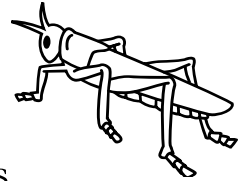
Set A6 ★ Independent Worksheet 3



INDEPENDENT WORKSHEET

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.

<p>ex. 6 and 8</p> <p>6, 12, 18, 24 8, 16, 24 24 is the LCM of 6 and 8</p>	<p>a 4 and 9</p>	<p>b 5 and 8</p>	<p>c 6 and 14</p>
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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.

<p>ex. $\frac{5}{6}$ ★ $\frac{6}{8}$</p> <p>$\frac{5 \times 4}{6 \times 4} = \frac{20}{24}$ $\frac{6 \times 3}{8 \times 3} = \frac{18}{24}$</p>	<p>a $\frac{3}{4}$ $\frac{7}{9}$</p>	<p>b $\frac{2}{5}$ $\frac{3}{8}$</p>	<p>c $\frac{4}{6}$ $\frac{9}{14}$</p>
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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.

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

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

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

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.