

LESSON
4-3 **Problem Solving**
Greatest Common Factor

Write the correct answer. *Use the ladder method.*

1. Carolyn has 24 bottles of shampoo, 36 tubes of hand lotion, and 60 bars of lavender soap to make gift baskets. She wants to have the same number of each item in every basket. What is the greatest number of baskets she can make without having any of the items left over?

2. There are 40 girls and 32 boys who want to participate in the relay race. If each team must have the same number of girls and boys, what is the greatest number of teams that can race? How many boys and girls will be on each team?

3. Ming has 15 quarters, 30 dimes, and 48 nickels. He wants to group his money so that each group has the same number of each coin. What is the greatest number of groups he can make? How many of each coin will be in each group? How much money will each group be worth?

4. A gardener has 27 tulip bulbs, 45 tomato plants, 108 rose bushes, and 126 herb seedlings to plant in the city garden. He wants each row of the garden to have the same number of each kind of plant. What is the greatest number of rows that the gardener can make if he uses all the plants?

Circle the letter of the correct answer.

5. Kim packed 6 boxes with identical supplies. It was the greatest number she could pack and use all the supplies. Which of these is her supply list?
- A 24 pencils, 36 pens, 10 rulers
 - B 12 rulers, 30 pencils, 45 pens
 - C 42 pencils, 18 rulers, 72 pens
 - D 60 pens, 54 pencils, 32 rulers

Why?

6. The sum of three numbers is 60. Their greatest common factor is 4. Which of the following lists shows those three numbers?

- F 4, 16, 36
- G 8, 20, 32
- H 14, 16, 30
- J 10, 18, 32

Why?

Name _____

Hour _____

Solve. Use the ladder method.

7. There are 42 pens and 63 pencils. All of the pens and pencils are given to the students in Mr. Antico's class. Each student receives the same number of pens and pencils. What is the maximum number of students in the class?

3. There are 16 boys and 12 girls in Mrs. Hart's math class. She divides the class into study groups so that each group has the same number of boys and the same number of girls. What is the greatest number of study groups she can make if every student is assigned to a group?

1. Mr. Hernandez, a farmer, has 160 apples, 80 plums, and 120 pears. He wants to divide the fruit into packages with the same number of apples, the same number of plums, and the same number of pears in each package. What is the greatest number of packages he can have if every piece of fruit is placed in a package?

7. Michael has 27 baseball cards, 9 football cards and 6 basketball cards. What is the greatest number of friends he can give the cards to so that each friend receives the same number of baseball, football, and basketball cards and he gives all the cards away?

Name _____ Hour _____

Find the GCF. Use the ladder method.

1 b. 60, 48

2 b. 48, 90

3 b. 44, 55

4 b. 65, 26

5 b. 20, 100

6 b. 78, 42

7 b. 30, 40

8 b. 48, 32

9 b. 80, 90

Find the GCF. Use the ladder method.

1 b. 9, 66, 27

2 b. 13, 39, 65

3 b. 49, 14, 84

4 b. 78, 13, 65

5 b. 56, 70, 42

6 b. 20, 40, 50

7 b. 75, 90, 5

8 b. 26, 39, 91

9 b. 96, 80, 54
