3.3 Greatest Common Factor

Chapter 3: Factors, Multiples, and Fractions

Name: _____ Date: _____ Class/Period: _____

Problem 3.35 Directions:
Find each GCF. Use factor lists, prime factorization, or the ladder method unless a particular method is specified.

Find $\mathrm{GCF}(15, 45)$.

Problem 3.36 Directions:
Find each GCF. Use factor lists, prime factorization, or the ladder method unless a particular method is specified.

Find $\mathrm{GCF}(27, 63)$.

Problem 3.37 Directions:
Find each GCF. Use factor lists, prime factorization, or the ladder method unless a particular method is specified.

Find $\mathrm{GCF}(9, 16)$.

Problem 3.38 Directions:
Find each GCF. Use factor lists, prime factorization, or the ladder method unless a particular method is specified.

Find $\mathrm{GCF}(28, 48)$.

Problem 3.39 Directions:
Find each GCF. Use factor lists, prime factorization, or the ladder method unless a particular method is specified.

Find $\mathrm{GCF}(35, 84)$.

Problem 3.40 Directions:
Find each GCF. Use factor lists, prime factorization, or the ladder method unless a particular method is specified.

Find $\mathrm{GCF}(72, 120)$ using the ladder method.

Problem 3.41 Directions:
Find each GCF. Use factor lists, prime factorization, or the ladder method unless a particular method is specified.

Find $\mathrm{GCF}(30, 135)$.

Problem 3.42 Directions:
Find each GCF. Use factor lists, prime factorization, or the ladder method unless a particular method is specified.

Find $\mathrm{GCF}(12, 20, 56)$.

Problem 3.43 Directions:
Find each GCF. Use factor lists, prime factorization, or the ladder method unless a particular method is specified.

Find $\mathrm{GCF}(36, 54, 72)$ using the ladder method.

Problem 3.44 Directions:
Find each GCF. Use factor lists, prime factorization, or the ladder method unless a particular method is specified.

Kali has 14 tulips and 21 carnations. She makes the greatest possible number of identical bouquets with no flowers left. How many bouquets can she make, and what is in each bouquet?

Problem 3.45 Directions:
Find each GCF. Use factor lists, prime factorization, or the ladder method unless a particular method is specified.

A raffle committee has 54 candy packs and 66 stuffed animals. What is the greatest number of identical prize bags it can make with no leftovers? What will each prize bag contain?

Problem 3.46 Directions:
Find each GCF. Use factor lists, prime factorization, or the ladder method unless a particular method is specified.

A fruit stand has 56 oranges, 70 apples, and 42 pears. Find the greatest number of identical baskets and the amount of each fruit in every basket.

Problem 3.47 Directions:
Find each GCF. Use factor lists, prime factorization, or the ladder method unless a particular method is specified.

Two ropes are 45 inches and 63 inches long. They are cut into equal pieces of greatest possible length. How long is each piece, and how many pieces are made?

Problem 3.48 Directions:
Find each GCF. Use factor lists, prime factorization, or the ladder method unless a particular method is specified.

A student begins a ladder for 48 and 60 by placing 8 on the left. Is this a valid ladder step? Explain whether the ladder method requires the divisor to be prime.

Problem 3.49 Directions:
Find each GCF. Use factor lists, prime factorization, or the ladder method unless a particular method is specified.

A student finds

$$\mathrm{GCF}(24, 40) = 2$$

because both numbers are even. Is the student correct? Why or why not? Continue the ladder until the true GCF is found.