Name _____

Reteaching
5-3

Greatest Common Factor

The greatest number that divides into two numbers is the greatest common factor (GCF) of the two numbers. Here are two ways to find the GCF of 12 and 40.

List the Factors

Step 1: List the factors of each number.

12: 1, 2, 3, 4, 6, 12

40: 1, 2, 4, 5, 8, 10, 20, 40

Step 2: Circle the factors that are common to both numbers.

12: 1, (2), 3, (4), 6, 12

40: 1, (2), (4), 5, 8, 10, 20, 40

Step 3: Choose the greatest factor that is common to both numbers. Both 2 and 4 are common factors, but 4 is greater.

The GCF is 4.

Use Prime Factorization

Step 1: Write the prime factorization of each number.

12: $2 \times 2 \times 3$

40: $2 \times 2 \times 2 \times 5$

Step 2: Circle the prime factors that the numbers have in common.

12: $(2) \times (2) \times 3$

40: $(2) \times (2) \times 2 \times 5$

Step 3: Multiply the common factors.

$2 \times 2 = 4$ The GCF is 4.

Find the GCF for each set of numbers.

1. 10, 70 _____ **2.** 4, 20 _____ **3.** 18, 24 _____

4. 18, 63 _____ **5.** 36, 42 _____ **6.** 14, 28 _____

7. Number Sense Name two numbers that have a greatest common factor of 8.

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8. Geometry Al's garden is 18 feet long and 30 feet wide. He wants to put fence posts the same distance apart along both the length and width of the fence. What is the greatest distance apart he can put the fence posts?

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