

### Objective 3

Find the Greatest Common Factor of Two Whole Numbers

Vocab:

**Greatest Common Factor (GCF):** Factors of a number are whole numbers that can be multiplied together to get that number. The greatest common factor is the *greatest number that is a factor* of two or more numbers

Example 1: What is the GCF of 72 and 96?

Step 1: List all the factors of 72 and 96

Number	Factors
72	1,2,3,4,6,8,9,12,18,24,36,72
96	1,2,3,4,6,8,12,16,24,32,48,96

Step 2: Identify the common factors of 72 and 96. List the numbers from the table that are **common** (remember that definition!) to 72 and 96

Common Factors: 1,2,3,4,6,8,12,24

Step 3: Identify the greatest common factor (the largest number) the two numbers have in common.

The greatest common factor is 24. ←

Answer is 24

Example 2: What is the GCF of 66 and 99?

Step 1:

Number	Factors
66	1,3,6,11,22,33, 66
99	1,3,9,11,33,99

Step 2: Common Factors: 1,3,11,33

Step 3: The GCF of 66 and 99 is 33 ←

Answer is 33

Guided Practice:

GCF of 12 and 15?

GCF of 48 and 96?

**Practice:** Find the GCF of the following pairs of numbers. List all the common factors next to each pair. *Show your work!*

1. 6 and 8? \_\_\_\_\_
2. 50 and 30? \_\_\_\_\_
3. 84 and 92? \_\_\_\_\_
4. 15 and 6? \_\_\_\_\_
5. 40 and 16? \_\_\_\_\_
6. 56 and 84? \_\_\_\_\_
7. 90 and 65? \_\_\_\_\_
8. 15 and 60? \_\_\_\_\_

**Additional Help:**

[www.mathsisfun.com/greatest-common-factor.html](http://www.mathsisfun.com/greatest-common-factor.html)

[learnzillion.com/lessons/2821-find-the-greatest-common-factor-of-two-numbers](http://learnzillion.com/lessons/2821-find-the-greatest-common-factor-of-two-numbers)