Name _____ Date _____ Class _____

SKILL 7: Least Common Multiple

The **least common multiple (LCM)** of two or more whole numbers is the smallest number that is a common multiple of the given numbers.

Example 1

Find the least common multiple (LCM) of 6 and 8.

List the first several multiples of each number.

Multiples of 6: 6, 12, 18, (24), 30, 36, 42, (48)

Multiples of 8: 8, 16, (24), 32, 40, (48), 56

common multiples

The least common multiple (LCM) of 6 and 8 is 24.

Example 2

Find the least common multiple of 15 and 30.

When one number is a multiple of the other, the larger number is the least common multiple.

30 is 2 × 15, so 30 is a multiple of 15. The least common multiple of 15 and 30 is 30.

Example 3

Find the least common multiple of 30 and 21 by using prime factorization.

Write the prime factors of each number. Circle pairs of common factors as you did to find GCF

$30 = 2 \times (3) \times 5$

$21 = (3) \times 7$

To find the LCM, multiply one number by the uncircled factors of the other number.

The LCM of 30 and 21 = $30 \times 7 = 210$.

Guided Practice

1. Find the least common multiple of 12 and 16.

a. List the first six multiples of 12: _____

b. List the first six multiples of 16: _____

c. LCM: _____

2. Find the least common multiple of 24 and 48.

a. Is 48 a multiple of 24? _____ **b.** LCM: _____

3. Find the least common multiple of 6 and 11.

a. Do 6 and 11 have a common factor? _____ **b.** LCM: _____