1.1 Least Common Multiple (LCM)

Objective: To find the Least Common Multiple (LCM) of two numbers

In real life, **multiples** happen repeatedly

Least Common Multiple

Multiple – the product of the number and any nonzero whole number

Common Multiple – a multiple shared by two or more numbers

Least Common Multiple (LCM) – the smallest common multiple of two or more numbers

List the Multiples

Step 1: List the multiples of each number
Step 2: Compare the lists and determine which common multiple is the smallest

Examples: Find the common multiples that are less than 50 and identify the LCM:

1) 4 & 6
   4: 4, 8, 12, 16, 20, 24, 28, 32, 36, 40, 44, 48
   6: 6, 12, 18, 24, 30, 36, 42, 48

List the Multiples

Step 1: List the multiples of each number
Step 2: Compare the lists and determine which common multiple is the smallest

Examples: Find the common multiples that are less than 50 and identify the LCM:

1) 4 & 6
   4: 4, 8, 12, 16, 20, 24, 28, 32, 36, 40, 44, 48
   6: 6, 12, 18, 24, 30, 36, 42, 48   LCM = 12

2) 4, 5, 8
   4: 4, 8, 12, 16, 20, 24, 28, 32, 36, 40, 44, 48
   5: 5, 10, 15, 20, 25, 30, 35, 40, 45
   8: 8, 16, 24, 32, 40, 48

List the Multiples

Step 1: List the multiples of each number
Step 2: Compare the lists and determine which common multiple is the smallest

Examples: Find the common multiples that are less than 50 and identify the LCM:

1) 4 & 6

4: 4, 8, 12, 16, 20, 24, 28, 32, 36, 40, 44, 48

6: 6, 12, 18, 24, 30, 36, 42, 48   LCM = 12

2) 4, 5, 8

4: 4, 8, 12, 16, 20, 24, 28, 32, 36, 40, 44, 48

5: 5, 10, 15, 20, 25, 30, 35, 40, 45

8: 8, 16, 24, 32, 40, 48

LCM = 40

3) Ari goes to the gym every 4 days and Sophia goes to the gym every 6 days. They both exercised today. How many days from today will be the next day they exercise together?

4: 4, 8, 12, 16, 20, 24, 28, 32, 36, 40, 44, 48
6: 6, 12, 18, 24, 30, 36, 42, 48

LCM = 12

Ari and Sophia will both exercise at the gym in 12 days.