3rd Grade Math: Kilometers and Meters

What Are Kilometers and Meters?

- **Kilometers** and **meters** are units of length in the metric system.
    - **Meters (m)**: A meter is a unit used to measure medium distances or heights.
    - **Kilometers (km)**: A kilometer is a larger unit used to measure longer distances, like the distance between cities or how far you can walk.
- **1 kilometer = 1,000 meters**.

How to Measure Distance in Kilometers and Meters

1. **When to Use Meters**:

2. Use **meters** to measure smaller distances, like the length of a room, the height of a building, or the width of a playground.

3. **When to Use Kilometers**:

Use **kilometers** to measure longer distances, like the distance between two towns, or how far you can travel by car or bike.

Converting Between Kilometers and Meters

- **To convert kilometers to meters**, multiply the number of kilometers by 1,000.

$$1 \, \text{kilometer} = 1,000 \, \text{meters}$$

- **To convert meters to kilometers**, divide the number of meters by 1,000.

$$1,000 \, \text{meters} = 1 \, \text{kilometer}$$

Example 1: Converting Kilometers to Meters

Problem:

How many meters are in 3 kilometers?

Solution:

Multiply the number of kilometers by 1,000:

$$3 \, \text{kilometers} \times 1,000 = 3,000 \, \text{meters}$$

Answer:

3 kilometers = 3,000 meters.

Example 2: Converting Meters to Kilometers

Problem:

How many kilometers are in 2,500 meters?

Solution:

Divide the number of meters by 1,000:

$$2,500 \, \text{meters} \div 1,000 = 2.5 \, \text{kilometers}$$

Answer:

2,500 meters = 2.5 kilometers.

Example 3: Comparing Distances

Problem:

The distance from Alex's house to the park is 750 meters, and the distance to the library is 1.2 kilometers. Which place is farther, and by how much?

Steps:

1. Convert 1.2 kilometers to meters:

$$1.2 \, \text{kilometers} \times 1,000 = 1,200 \, \text{meters}$$

2. Subtract the distance to the park from the distance to the library:

$$1,200 \, \text{meters} - 750 \, \text{meters} = 450 \, \text{meters}$$

Answer:

The library is 450 meters farther than the park.

Example 4: Adding Kilometers and Meters

Problem:

You hike 4 kilometers in the morning and 1,250 meters in the afternoon. How far do you hike in total?

Steps:

1. Convert 4 kilometers to meters:

$$4 \, \text{kilometers} \times 1,000 = 4,000 \, \text{meters}$$

2. Add the distances together:

$$4,000 \, \text{meters} + 1,250 \, \text{meters} = 5,250 \, \text{meters}$$

3. Convert back to kilometers:

$$5,250 \, \text{meters} \div 1,000 = 5.25 \, \text{kilometers}$$

Answer:

You hike 5.25 kilometers in total.

Conclusion:

- **Kilometers** and **meters** are both units used to measure length, with kilometers being the larger unit.
- You can easily convert between kilometers and meters by multiplying or dividing by 1,000.

By understanding and practicing these conversions, you'll be able to measure and compare distances in the real world!