

Measurement Word Problems

Grades 5 to 6 - Length, volume, and capacity

Directions

Read each problem carefully. Convert units when needed, show your work, and write your final answer.

1. Ribbon Length

A ribbon is 3.75 meters long. Another ribbon is 245 centimeters long. Which ribbon is longer, and by how many centimeters?

2. Hiking Distance

A trail is 4.6 kilometers long. Emma hikes 1,850 meters before stopping. How many meters does she still need to hike to finish the trail?

3. Classroom Shelf

A classroom shelf is 1.2 meters long. Each book is about 6 centimeters thick. About how many books can fit on the shelf?

4. Juice Pitcher

A pitcher holds 2.5 liters of juice. Each cup holds 250 milliliters. How many full cups can be poured from the pitcher?

5. Water Bottles

A water cooler contains 18 liters of water. Each bottle holds 750 milliliters. How many full bottles can be filled from the cooler?

6. Recipe Measurement

A recipe needs 1.5 liters of broth. You already added 650 milliliters. How many more milliliters of broth are needed?

7. Garden Plot

A rectangular garden is 4.5 meters long and 2 meters wide. What is the total distance around the garden in meters?

8. Swimming Pool

A pool is 25 meters long. A swimmer completes 18 laps. What total distance does the swimmer travel in meters?

9. Paint Needed

Each paint can contains 3.2 liters of paint. A project requires 5.6 liters of paint. How many full cans are needed?

10. Trail Map

A map shows a walking path that is 1.75 kilometers long. How long is the path in meters?

Answer Key

Step-by-step solutions

Solutions

1. Convert 3.75 meters to centimeters: 375 cm. Compare with 245 cm. $375 - 245 = 130$ cm. The first ribbon is longer by 130 cm.
2. Convert 4.6 km to meters: 4,600 m. Subtract 1,850 m. $4,600 - 1,850 = 2,750$ m remaining.
3. Convert 1.2 meters to centimeters: 120 cm. Divide by 6 cm per book. 120 divided by 6 = 20 books.
4. Convert 2.5 liters to milliliters: 2,500 mL. Divide by 250 mL per cup. 2,500 divided by 250 = 10 cups.
5. Convert 18 liters to milliliters: 18,000 mL. Divide by 750 mL per bottle. 18,000 divided by 750 = 24 bottles.
6. Convert 1.5 liters to milliliters: 1,500 mL. Subtract 650 mL. $1,500 - 650 = 850$ mL needed.
7. Perimeter = $2 \times (4.5 + 2) = 2 \times 6.5 = 13$ meters.
8. Each lap is 25 meters. Multiply: $25 \times 18 = 450$ meters total.
9. Divide 5.6 liters by 3.2 liters per can. 5.6 divided by 3.2 = 1.75. You need 2 full cans.
10. 1.75 kilometers $\times 1,000 = 1,750$ meters.