

Decimal Place Value & Units of Measurement

A. Fill in the Blanks

1. In the number 19.403, the digit 3 is in the _____ place.
2. To convert from grams to kilograms, you must _____ by 1000.
3. There are _____ centimeters in 1 dekameter.
4. When converting from a smaller unit to a larger unit (e.g., mL to L), the decimal point moves to the _____.
5. 78 meters is equal to _____ kilometers.

B. Match the measurement in Column A with its equivalent value in Column B.

Column A	Column B
1. 2.05 km	A. 205 g
2. 20.5 L	B. 2050 m
3. 0.205 kg	C. 2.05 cm
4. 205 mm	D. 20,500 mL
5. 0.0205 m	E. 20.5 cm

C. Apply your knowledge to solve these problems.

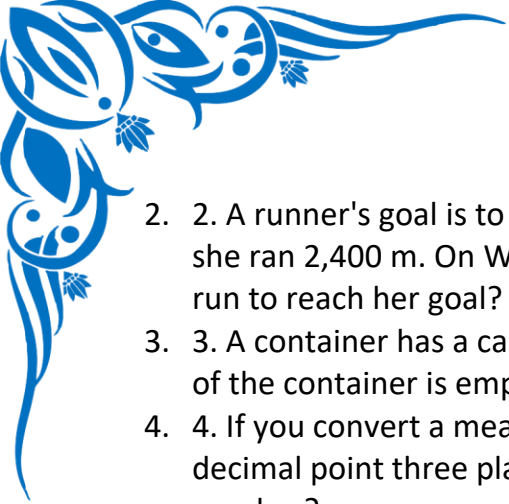
1. Convert 0.082 kilometers to meters.
2. Convert 540 milliliters to liters.
3. Order the following lengths from shortest to longest: 1.45 m, 135 cm, 1.055 m, 1500 mm
4. Write the measurement 8.452 kilograms in expanded form using units (e.g., 8 kg + 4 hg...).
5. What is the total length of a 2.5 m ribbon and a 95 cm ribbon? Give your answer in meters.

D. Answer these quick questions to get your brain working!

1. In the number 45.678, what is the place value of the digit 7?
2. Convert 3.5 meters to centimeters. _____ cm
3. Convert 2,500 grams to kilograms. _____ kg
4. Which is greater: 0.75 L or 75 mL?
5. Write the number "sixty-two and five hundredths" as a decimal.

E. Think critically to solve these more difficult problems.

1. A rectangular garden is 5.2 meters long and 350 centimeters wide. What is the area of the garden in square meters?



2. 2. A runner's goal is to run 10 kilometers in a week. On Monday, she ran 2.1 km. On Tuesday, she ran 2,400 m. On Wednesday, she ran 3.25 km. How many more meters does she need to run to reach her goal?
3. 3. A container has a capacity of 3.5 liters. It is filled with 1,250 mL of water. What percentage of the container is empty? (Round to the nearest whole percent).
4. 4. If you convert a measurement from dekameters (dam) to centimeters (cm), you move the decimal point three places to the right. By what power of 10 are you multiplying the original number?
5. 5. The mass of a single grain of sand is approximately 0.0025 grams. What is the mass of 10,000 grains of sand in kilograms?

F. Read the scenarios carefully and solve.

1. Shopping: Bananas cost \$2.80 per kilogram. Sarah buys a bunch of bananas that weighs 750 grams. How much will she pay?
2. Travel: The Chen family is on a road trip. Their car's odometer reads 24,567.8 km at the start. They drive 455 km on the first day and 398.5 km on the second day. What will the odometer read at the end of the second day?
3. Baking: A recipe for a large batch of cookies requires 0.65 liters of milk. You only have a 2-liter carton that is exactly half full. Do you have enough milk? If so, how much milk will be left in the carton (in milliliters)?
4. Science Experiment: A chemist needs to mix three liquids. She uses 0.125 L of solution A, 45 mL of solution B, and 8 cL of solution C. What is the total volume of the mixture in milliliters?
5. Sports: In a long jump competition, Leo's first jump was 4.82 m. His second jump was 4.9 m. His third jump was 485 cm. Which jump was his best, and by how many centimeters did it beat his worst jump?

G. True or False

1. 5.02 kg is greater than 5200 g. _____
2. The number 4.5 represents "four and five tenths." _____
3. To convert kilometers to meters, you move the decimal point three places to the left. _____
4. $3.5 \text{ L} + 600 \text{ mL} = 4.1 \text{ L}$. _____
5. 25 mm is equal to 0.25 m. _____