

Metric Conversions with Decimals

Name: _____

Grade 5 · Convert metric units both ways by multiplying or dividing by 10, 100 or 1,000

How it works

Metric units are built on 10, 100 and 1,000, so converting means multiplying or dividing by a power of 10.

To a smaller unit, multiply: $2.4 \text{ km} = 2.4 \times 1,000 = 2,400 \text{ m}$.

To a larger unit, divide: $360 \text{ cm} = 360 \div 100 = 3.6 \text{ m}$.

1 centimeter = 10 millimeters

1 meter = 100 centimeters

1 kilometer = 1,000 meters

1 kilogram = 1,000 grams

1 liter = 1,000 milliliters

A. Convert to the smaller unit.

- 3.5 kilometers = _____ meters
- 1.2 liters = _____ milliliters
- 0.75 kilograms = _____ grams
- 4.6 meters = _____ centimeters
- 2.5 centimeters = _____ millimeters
- 0.4 kilometers = _____ meters
- 6.25 meters = _____ centimeters
- 0.08 liters = _____ milliliters

B. Convert to the larger unit.

- 250 centimeters = _____ meters
- 4,800 meters = _____ kilometers
- 600 grams = _____ kilograms
- 35 millimeters = _____ centimeters
- 1,750 milliliters = _____ liters
- 90 centimeters = _____ meters
- 125 meters = _____ kilometers
- 7,040 grams = _____ kilograms

C. Complete each table.

kilometers	meters
1	1,000
2.5	
0.5	
3.2	
0.75	

meters	centimeters
1	100
1.5	
0.3	
2.75	
0.06	

kilograms	grams
1	1,000
0.5	
4.2	
0.25	
1.05	

D. Compare. Write >, < or = in the circle.

- 1.5 kilometers ○ 1,500 meters
- 0.8 meters ○ 85 centimeters
- 2.3 kilograms ○ 2,030 grams
- 0.5 liters ○ 450 milliliters
- 4 centimeters ○ 45 millimeters
- 0.25 kilometers ○ 250 meters

Metric Conversions with Decimals (Answer Key)

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To a smaller unit, multiply: $2.4 \text{ km} = 2.4 \times 1,000 = 2,400 \text{ m}$.

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1 centimeter = 10 millimeters

1 meter = 100 centimeters

1 kilometer = 1,000 meters

1 kilogram = 1,000 grams

1 liter = 1,000 milliliters

A. Convert to the smaller unit.

- 3.5 kilometers = 3,500 meters
- 1.2 liters = 1,200 milliliters
- 0.75 kilograms = 750 grams
- 4.6 meters = 460 centimeters
- 2.5 centimeters = 25 millimeters
- 0.4 kilometers = 400 meters
- 6.25 meters = 625 centimeters
- 0.08 liters = 80 milliliters

B. Convert to the larger unit.

- 250 centimeters = 2.5 meters
- 4,800 meters = 4.8 kilometers
- 600 grams = 0.6 kilograms
- 35 millimeters = 3.5 centimeters
- 1,750 milliliters = 1.75 liters
- 90 centimeters = 0.9 meters
- 125 meters = 0.125 kilometers
- 7,040 grams = 7.04 kilograms

C. Complete each table.

kilometers	meters
1	1,000
2.5	2,500
0.5	500
3.2	3,200
0.75	750

meters	centimeters
1	100
1.5	150
0.3	30
2.75	275
0.06	6

kilograms	grams
1	1,000
0.5	500
4.2	4,200
0.25	250
1.05	1,050

D. Compare. Write >, < or = in the circle.

- 1.5 kilometers $\textcircled{=}$ 1,500 meters
- 0.8 meters $\textcircled{<}$ 85 centimeters
- 2.3 kilograms $\textcircled{>}$ 2,030 grams
- 0.5 liters $\textcircled{>}$ 450 milliliters
- 4 centimeters $\textcircled{<}$ 45 millimeters
- 0.25 kilometers $\textcircled{=}$ 250 meters