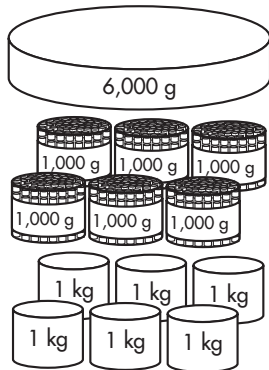


Converting Metric Units of Mass

How to convert a mass measurement from one metric unit to another:

Converting a mass from a smaller to a larger metric unit

6,000 grams = _____ kilograms



Think: If I measure the same mass using a larger unit, I will need a smaller number of units.

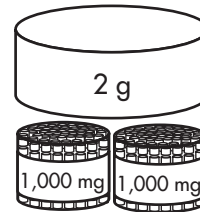
Operation: Divide.

You know $1,000\text{ g} = 1\text{ kg}$.

Find $6,000 \div 1,000$; $6,000\text{ g} = 6\text{ kg}$

Converting a mass from a larger to a smaller metric unit

2 grams = _____ milligrams



Think: If I measure the same mass using a smaller unit, I will need a larger number of units.

Operation: Multiply.

You know $1\text{ g} = 1,000\text{ mg}$.

Find $2 \times 1,000$; $2\text{ g} = 2,000\text{ mg}$

Relationships Between Metric Units of Mass					
Kilogram			Gram		Milligram
1 kg	=		1,000 g		
			1g	=	1,000 mg

Convert each unit of measurement.

- $72\text{ g} = \text{_____ mg}$
- $8,000\text{ g} = \text{_____ kg}$
- $2,000,000\text{ mg} = \text{_____ kg}$
- $2,340\text{ kg} = \text{_____ g}$

Compare. Use $<$, $>$, or $=$.

- $4,000\text{ mg}$ 5 g
- 64 kg $64,000\text{ g}$
- 3 kg $40,000\text{ mg}$
- $5,000\text{ g}$ 4 kg

Name _____

Converting Metric Units of Mass

Convert each unit of measurement.

1. 15,000 g = _____ kg
 2. 285 kg = _____ g
 3. 5,000 mg = _____ g
 4. 7,000 g = _____ kg
 5. 490,000 g = _____ kg
 6. 648 g = _____ mg
 7. Order the following masses from least to greatest:
500 g, 50 kg, 5,000 mg
-

Compare. Use $<$, $>$, or $=$.

8. 55,000 mg 5 kg
9. 20 g 2 kg
10. 11 g 1,100 mg
11. 4,000 mg 4 g
12. What is the value of x ? $40,000 \text{ mg} = 10x \text{ g}$
A 400 **B** 40 **C** 4 **D** 0.4
13. A recipe that serves two people calls for 1,600 milligrams of baking soda. You want to make enough for 10 people. How much baking soda will you need, in grams?

14. You want to convert 1 kilogram to milligrams. You already know that 1 kilogram = 1,000 grams. Explain how knowing that 1 gram = 1,000 milligrams can help you.
