Lesson 9: Grams and Kilograms, Liters and Milliliters
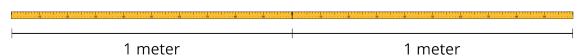
- Let's explore measurements in grams, kilograms, liters and milliliters.

Warm-up: Which One Doesn't Belong: Meter, Meter on the Page

Which one doesn't belong?
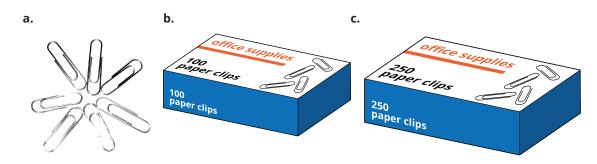
A. 2 m

B. 2,000 meters

C. 200 centimeters

D.
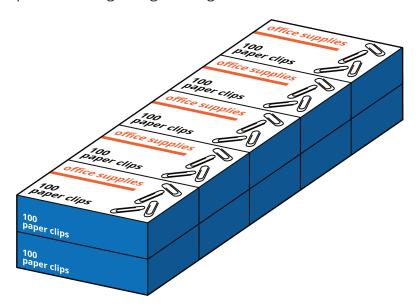

1 meter   1 meter

9.1: A Whole Lot of Paper Clips

One paper clip weighs 1 gram.

1. How many grams are the paper clips in each image?

a.

b.

office supplies
100 paper clips
100 paper clips

c.

office supplies
250 paper clips
250 paper clips

2. The paper clips in this image weigh 1 kilogram.

office supplies
100 paper clips
office supplies
100 paper clips
office supplies
100 paper clips
office supplies
100 paper clips
office supplies
100 paper clips
100 paper clips
100 paper clips

What is the relationship between kilograms and grams?

3. Complete the table with the missing amounts in grams.

kilograms (kg)	grams (g)
2	
7	
15	
$\frac{1}{2}$	
$9\frac{1}{2}$	

4. Which weighs more? Be prepared to explain how you know.

   a. 8 kilograms or 8 boxes with 100 paper clips in each box

   b. 1,250 paper clips or 1 kilogram

   c. 500 grams or 2 boxes of 250 paper clips in each box

   d. $\frac{1}{2}$ kilogram or 500 paper clips

9.2: Liters and Milliliters

1.   a. Estimate: How many times do we fill the 100-milliliter glass to get 1 liter of liquid? (Assume that each time the liquid is filled to the 100-milliliter line.)

b. Write a sentence to describe the relationship between milliliters and liters.

_____

_____

2. How many times do we need to fill each of these containers to get 1 liter?

a. A 1-milliliter medicine dropper

b. A 250-milliliter measuring cup

c. A 20-milliliter cup

3. Complete the table with the missing amounts in liters or milliliters.

liters (L)	milliliters (mL)
1	
4	
7	
16	
	500
	20,000