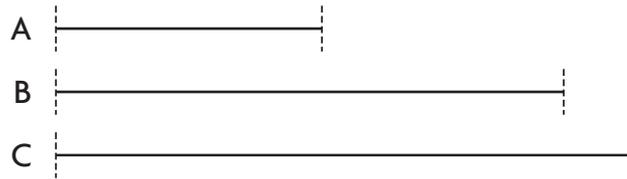


Name _____

Measure Length

You can measure length to the nearest half or fourth inch.

Use a ruler to measure lines A–C to the nearest half inch.



Step 1 Line up the left end of Line A with the zero mark on the ruler.

Step 2 The right end of Line A is between the half-inch marks for 1 and $1\frac{1}{2}$.

The mark that is closest to the right end is for $1\frac{1}{2}$ inches.

So, the length of Line A to the nearest half inch is $1\frac{1}{2}$ inches.

Repeat Steps 1 and 2 for lines B and C.

The length of Line B to the nearest half inch is $2\frac{1}{2}$ inches.

The length of Line C to the nearest half inch is 3 inches.

Measure the length to the nearest half inch. Is the crayon closest to $1\frac{1}{2}$ inches, 2 inches, or $2\frac{1}{2}$ inches?



Name _____

Estimate and Measure Liquid Volume

Liquid volume is the amount of liquid in a container. You can measure liquid volume using the metric unit **liter (L)**.

A water bottle holds about 1 liter. Estimate how much liquid a plastic cup and a fish bowl will hold. Then write the containers in order from the greatest to least liquid volume.



A plastic cup holds **less than 1 liter**.

A water bottle holds **about 1 liter**.

A fish bowl holds **more than 1 liter**.

Think: A plastic cup is *smaller* than a water bottle.

Think: A fish bowl is *larger* than a water bottle.

So, the order of the containers from greatest to least liquid volume is **fish bowl, water bottle, plastic cup**.

1. A wading pool is filled with water. Is the amount *more than 1 liter, about 1 liter, or less than 1 liter?*



Estimate how much liquid volume there will be when the container is filled. Write *more than 1 liter, about 1 liter, or less than 1 liter*.

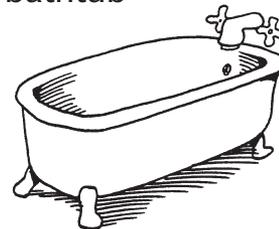
2. vase



3. mug



4. bathtub



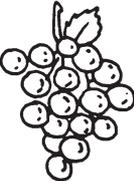
Name _____

Estimate and Measure Mass

Mass is the amount of matter in an object. You can measure mass using the metric units **gram** (g) and **kilogram** (kg).

Should you use gram or kilogram to measure the mass of a penny?

The mass of one grape is about 1 gram.



The mass of a book is about 1 kilogram.

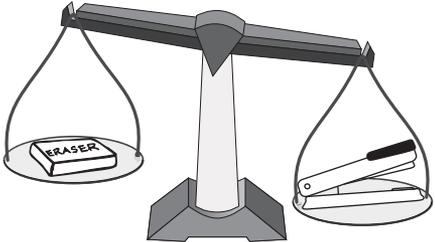


Think: The mass of a penny is closer to the mass of a grape than to the mass of a book. So, use **grams** to measure the mass of a penny.

You can use a pan balance to compare the masses of an eraser and a stapler.

Think: The pan with the stapler is lower.

So, the mass of a stapler is **more than** the mass of an eraser.

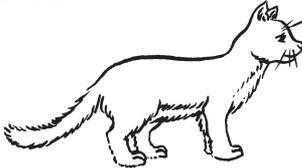


Choose the unit you would use to measure the mass. Write *gram* or *kilogram*.

1. cherry



2. cat

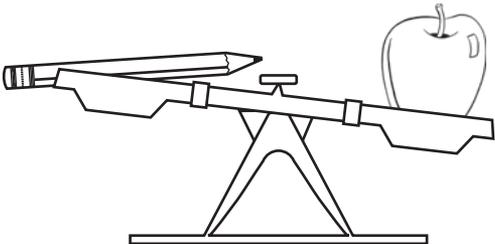


3. pencil



4. Compare the masses of the objects. Write *is less than*, *is the same as*, or *is more than*.

The mass of the pencil _____ the mass of the apple.



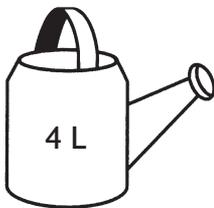
Name _____

Solve Problems About Liquid Volume and Mass

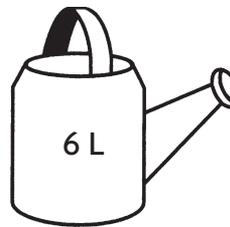
You can use a model or write an equation to solve problems about liquid volume and mass.

Tina's watering can holds 4 liters of water. Todd's watering can holds 6 liters of water. What is the total liquid volume of both watering cans?

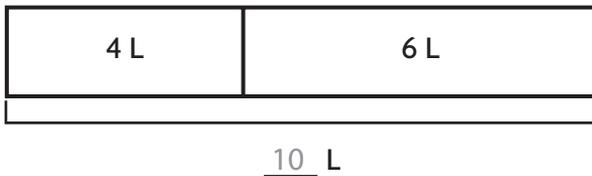
Tina's Watering Can



Todd's Watering Can



Use a bar model.



Think: Add to find the total.

$$4 \text{ L} + 6 \text{ L} = 10 \text{ L}$$

So, the total liquid volume is 10 L.

Write an equation.

Think: I can write an addition equation to find the sum of the liquid volumes.

$$\underline{4} \text{ } \oplus \text{ } \underline{6} = \underline{10}$$

So, the total liquid volume is 10 L.

Write an equation and solve the problem.

- Kyra has a small bucket that holds 3 liters of water and a large bucket that holds 5 liters of water. Altogether, how many liters of water do the two buckets hold?

$$\underline{\quad} \bigcirc \underline{\quad} = \underline{\quad} \underline{\quad}$$

- Rick's recipe calls for 25 grams of raisins and 40 grams of nuts. How many more grams of nuts than raisins does the recipe call for?

$$\underline{\quad} \bigcirc \underline{\quad} = \underline{\quad} \underline{\quad}$$