







Name \_\_\_\_\_

## Measurement Benchmarks

You can use benchmarks to estimate measurements.





The chart shows benchmarks for customary units of measurement.

Benchmarks for Some Customary Units					
					
1 ft about 1 foot	1 yd about 1 yard	about 1 cup	about 1 gallon	about 1 ounce	about 1 pound

Here are some more examples of estimating with customary units.

- The width of a professional football is about 1 foot.
- A large fish bowl holds about 1 gallon of water.
- A box of cereal weighs about 1 pound.

The chart shows benchmarks for metric units of measurement.

Benchmarks for Some Metric Units					
					
about 1 centimeter	about 1 meter	about 1 milliliter	about 1 liter	about 1 gram	about 1 kilogram

Here are some more examples of estimating with metric units.

- The width of a large paper clip is about 1 centimeter.
- A pitcher holds about 1 liter of juice.
- Three laps around a track is about 1 kilometer.

Use benchmarks to choose the customary unit you would use to measure each.

1. length of a school bus

2. weight of a computer

\_\_\_\_\_

\_\_\_\_\_

Use benchmarks to choose the metric unit you would use to measure each.

3. the amount of liquid a bottle of detergent holds

4. distance between two cities

\_\_\_\_\_

\_\_\_\_\_

Name \_\_\_\_\_

## Measurement Benchmarks

**Essential Question** How can you use benchmarks to understand the relative sizes of measurement units?



Measurement and Data—  
4.MD.A.1

**MATHEMATICAL PRACTICES**

MP1, MP5

### Unlock the Problem

Jake says the length of his bike is about four yards. Use the benchmark units below to determine if Jake's statement is reasonable.



Customary Units of Length			
<p>1 in. about 1 inch</p>	<p>1 ft about 1 foot</p>	<p>1 yd about 1 yard</p>	<p>1 mile in about 20 minutes</p>

A **mile** is a customary unit for measuring length or distance. The benchmark shows the distance you can walk in about 20 minutes.

A baseball bat is about one yard long. Since Jake's bike is shorter than four times the length of a baseball bat, his bike is shorter than four yards long.

So, Jake's statement \_\_\_\_\_ reasonable.

Jake's bike is about \_\_\_\_\_ baseball bats long.

### Example 1 Use the benchmark customary units.

Customary Units of Liquid Volume				
<p>1 cup = 8 fluid ounces</p>	<p>1 pint</p>	<p>1 quart</p>	<p>1 half gallon</p>	<p>1 gallon</p>

- About how much liquid is in a mug of hot chocolate? \_\_\_\_\_

Customary Units of Weight		
<p>about 1 ounce</p>	<p>about 1 pound</p>	<p>about 1 ton</p>

- About how much does a grapefruit weigh? \_\_\_\_\_




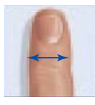



**MATHEMATICAL PRACTICES 2**

**Use Reasoning** Use benchmarks to explain how you would order the units of weight from heaviest to lightest.

**Benchmarks for Metric Units** Like place value, the metric system is based on multiples of ten. Each unit is 10 times as large as the next smaller unit. Below are some common metric benchmarks.

**Example 2** Use the benchmark metric units.

**Metric Units of Length**



 about 1 millimeter	 about 1 centimeter	 about 1 decimeter	 about 1 meter	 1 kilometer in about 10 minutes
--	--	---	--	---

A **kilometer** is a metric unit for measuring length or distance. The benchmark shows the distance you can walk in about 10 minutes.

- Is the length of your classroom greater than or less than one kilometer?

\_\_\_\_\_


**Metric Units of Liquid Volume**

 1 milliliter	 1 liter
---	--

- About how much medicine is usually in a medicine bottle?

about 120 \_\_\_\_\_

**Metric Units of Mass**

 about 1 gram	 about 1 kilogram
---	---

- About how much is the mass of a paper clip?

\_\_\_\_\_

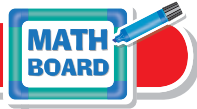


**MATHEMATICAL PRACTICES 7**

**Look for Structure**  
Explain how benchmark measurements can help you decide which unit to use when measuring.

Name \_\_\_\_\_

## Share and Show



Use benchmarks to choose the metric unit you would use to measure each.

1. mass of a strawberry

\_\_\_\_\_

2. length of a cell phone

\_\_\_\_\_

Circle the better estimate.

3. width of a teacher's desk  
10 meters or 1 meter

4. the amount of liquid a punch bowl holds  
2 liters or 20 liters

5. distance between Seattle and San Francisco  
6 miles or 680 miles

**Math Talk**

### MATHEMATICAL PRACTICES 3

**Apply** Which metric unit would you use to measure the distance across the United States? Explain.

## On Your Own

Use benchmarks to choose the customary unit you would use to measure each.

6. length of a football field

\_\_\_\_\_

7. weight of a pumpkin

\_\_\_\_\_

Circle the better estimate.

8. weight of a watermelon  
4 pounds or 4 ounces

9. the amount of liquid a fish tank holds  
10 cups or 10 gallons

Complete the sentence. Write *more* or *less*.

10. Matthew's large dog weighs \_\_\_\_\_ than one ton.

11. The amount of liquid a sink can hold is \_\_\_\_\_ than one cup of water.

12. A paper clip has a mass of \_\_\_\_\_ than one kilogram.

### Metric Units

centimeter  
meter  
kilometer  
gram  
kilogram  
milliliter  
liter

### Customary Units

inch  
foot  
yard  
ounce  
pound  
cup  
gallon

Name \_\_\_\_\_

## Customary Units of Length

A ruler is used to measure length. A ruler that is 1 foot long shows 12 inches in 1 foot. A ruler that is 3 feet long is called a yardstick. There are 3 feet in 1 yard.

**How does the size of a foot compare to the size of an inch?**

**Step 1** A small paper clip is about 1 inch long. Below is a drawing of a chain of paper clips that is about 1 foot long. Number each paper clip, starting with 1.



**Step 2** Complete this sentence.

In the chain of paper clips shown, there are 12 paper clips.

**Step 3** Compare the size of 1 inch to the size of 1 foot.

There are 12 inches in 1 foot.

So, 1 foot is 12 times as long as 1 inch.

**Complete.**

1. 5 feet = \_\_\_\_\_ inches

2. 3 yards = \_\_\_\_\_ feet

3. 5 yards = \_\_\_\_\_ feet

4. 4 feet = \_\_\_\_\_ inches

5. 6 feet = \_\_\_\_\_ inches

6. 8 yards = \_\_\_\_\_ feet

Name \_\_\_\_\_

## Customary Units of Length

**Essential Question** How can you use models to compare customary units of length?



Measurement and Data—4.MD.A.1  
Also 4.MD.A.2

**MATHEMATICAL PRACTICES**  
MP1, MP2, MP5

### Unlock the Problem

You can use a ruler to measure length. A ruler that is 1 foot long shows 12 inches in 1 foot. A ruler that is 3 feet long is called a yardstick. There are 3 feet in 1 yard.

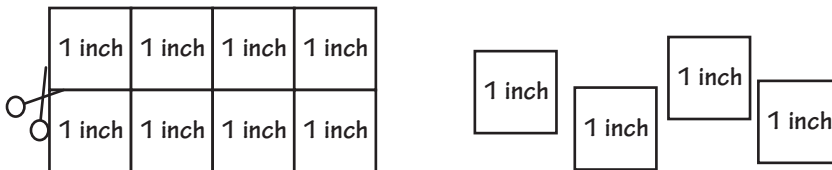


How does the size of a foot compare to the size of an inch?

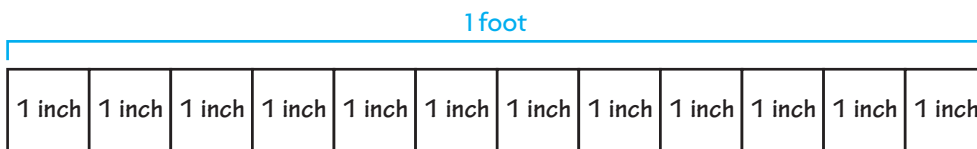
### Activity

**Materials** ■ 1-inch grid paper ■ scissors ■ tape

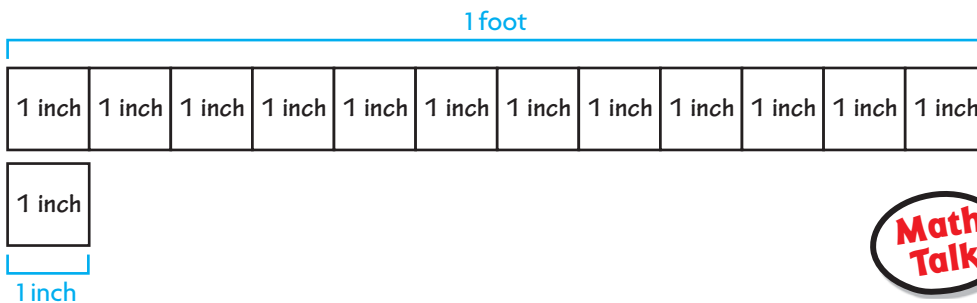
**STEP 1** Cut out the paper inch tiles. Label each tile 1 inch.



**STEP 2** Place 12 tiles end-to-end to build 1 foot. Tape the tiles together.



**STEP 3** Compare the size of 1 foot to the size of 1 inch.



**Think:** You need 12 inches to make 1 foot.



**MATHEMATICAL PRACTICES 2**

**Use Reasoning** Explain how you know the number of inches you need to make a yard.

So, 1 foot is \_\_\_\_\_ times as long as 1 inch.

**Example** Compare measures.

Emma has 4 feet of thread. She needs 50 inches of thread to make some bracelets. How can she determine if she has enough thread to make the bracelets?

Since 1 foot is 12 times as long as 1 inch, you can write feet as inches by multiplying the number of feet by 12.

**STEP 1** Make a table that relates feet and inches.

Feet	Inches
1	12
2	
3	
4	
5	

**Think:**

1 foot  $\times$  12 = 12 inches

2 feet  $\times$  12 = \_\_\_\_\_

3 feet  $\times$  \_\_\_\_\_ = \_\_\_\_\_

4 feet  $\times$  \_\_\_\_\_ = \_\_\_\_\_

5 feet  $\times$  \_\_\_\_\_ = \_\_\_\_\_



**STEP 2** Compare 4 feet and 50 inches.

4 feet



50 inches



**Think:** Write each measure in inches and compare using  $<$ ,  $>$ , or  $=$ .

\_\_\_\_\_ ○ \_\_\_\_\_

Emma has 4 feet of thread. She needs 50 inches of thread.

4 feet is \_\_\_\_\_ than 50 inches.

So, Emma \_\_\_\_\_ enough thread to make the bracelets.



**MATHEMATICAL PRACTICES 2**

**Represent a Problem**

Explain how making a table helped you solve the problem.

- What if Emma had 5 feet of thread? Would she have enough thread to make the bracelets? Explain.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

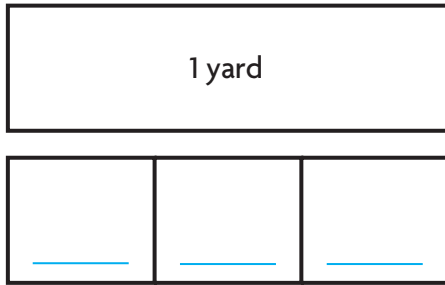


Name \_\_\_\_\_

## Share and Show



1. Compare the size of a yard to the size of a foot.  
Use a model to help.



1 yard is \_\_\_\_\_ times as long as \_\_\_\_\_ foot.

### Customary Units of Length

1 foot (ft) = 12 inches (in.)  
1 yard (yd) = 3 feet  
1 yard (yd) = 36 inches

Complete.

2. 2 feet = \_\_\_\_\_ inches      3. 3 yards = \_\_\_\_\_ feet      4. 7 yards = \_\_\_\_\_ feet



### MATHEMATICAL PRACTICES 4

**Interpret a Result** If you measured the length of your classroom in yards and then in feet, which unit would have a greater number of units? Explain.

## On Your Own

Complete.

5. 4 yards = \_\_\_\_\_ feet      6. 10 yards = \_\_\_\_\_ feet      7. 7 feet = \_\_\_\_\_ inches

**MATHEMATICAL PRACTICE 4** Use Symbols **Algebra** Compare using  $<$ ,  $>$ , or  $=$ .

8. 1 foot  13 inches      9. 2 yards  6 feet      10. 6 feet  60 inches

## Problem Solving • Applications

11. **THINK SMARTER** Joanna has 3 yards of fabric. She needs 100 inches of fabric to make curtains. Does she have enough fabric to make curtains? Explain. Make a table to help.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



Yards	Inches
1	
2	
3	

12. **THINK SMARTER** Select the measures that are equal. Mark all that apply.

- A 4 feet       C 36 feet       E 15 feet  
 B 12 yards       D 480 inches       F 432 inches



Name \_\_\_\_\_

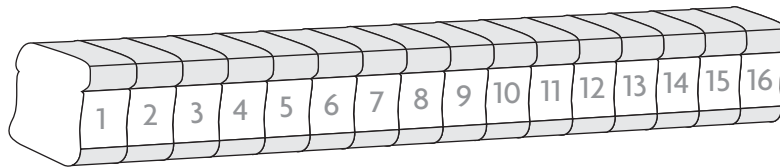
## Customary Units of Weight

**Ounces** and **pounds** are customary units of weight. A **ton** is a unit of weight that is equal to 2,000 pounds.

A slice of bread weighs about 1 ounce. Some loaves of bread weigh about 1 pound.

**How does the size of 1 ounce compare to the size of 1 pound?**

**Step 1** You know a slice of bread weighs about 1 ounce. Below is a drawing of a loaf of bread that weighs about 1 pound. Number each slice of bread, starting with 1.



**Step 2** Complete this sentence.

In the loaf of bread shown above, there are 16 slices of bread.

**Step 3** Compare the size of 1 ounce to the size of 1 pound.

There are 16 ounces in 1 pound.

So, 1 pound is 16 times as heavy as 1 ounce.

**Complete.**

1. 2 pounds = \_\_\_\_\_ ounces

2. 2 tons = \_\_\_\_\_ pounds

Think:  $2 \times 16 = 32$

3. 7 pounds = \_\_\_\_\_ ounces

4. 4 pounds = \_\_\_\_\_ ounces

5. 3 tons = \_\_\_\_\_ pounds

6. 10 pounds = \_\_\_\_\_ ounces

Name \_\_\_\_\_

## Customary Units of Weight

**Essential Question** How can you use models to compare customary units of weight?



Measurement and Data—4.MD.A.1  
Also 4.MD.A.2

**MATHEMATICAL PRACTICES**  
MP1, MP6, MP7

### Unlock the Problem

**Ounces** and **pounds** are customary units of weight. How does the size of a pound compare to the size of an ounce?

### Activity

**Materials** ■ color pencils

The number line below shows the relationship between pounds and ounces.



▲ You can use a spring scale to measure weight.

**STEP 1** Use a color pencil to shade 1 pound on the number line.

**STEP 2** Use a different color pencil to shade 1 ounce on the number line.

**STEP 3** Compare the size of 1 pound to the size of 1 ounce.

You need \_\_\_\_\_ ounces to make \_\_\_\_\_ pound.

So, 1 pound is \_\_\_\_\_ times as heavy as 1 ounce.

**Math Talk**

**MATHEMATICAL PRACTICES 6**

**Attend to Precision** How can you compare the size of 9 pounds to the size of 9 ounces?

- **MATHEMATICAL PRACTICE 6** **Explain** how the number line helped you to compare the sizes of the units.

---



---



---



---

**Example** Compare measures.

Nancy needs 5 pounds of flour to bake pies for a festival. She has 90 ounces of flour. How can she determine if she has enough flour to bake the pies?



**STEP 1** Make a table that relates pounds and ounces.

Pounds	Ounces
1	16
2	
3	
4	
5	

**Think:**

1 pound  $\times$  16 = 16 ounces

2 pounds  $\times$  16 = \_\_\_\_\_

3 pounds  $\times$  \_\_\_\_\_ = \_\_\_\_\_

4 pounds  $\times$  \_\_\_\_\_ = \_\_\_\_\_

5 pounds  $\times$  \_\_\_\_\_ = \_\_\_\_\_

**STEP 2** Compare 90 ounces and 5 pounds.

90 ounces



\_\_\_\_\_

5 pounds



\_\_\_\_\_

**Think:** Write each measure in ounces and compare using  $<$ ,  $>$ , or  $=$ .



Nancy has 90 ounces of flour. She needs 5 pounds of flour.

90 ounces is \_\_\_\_\_ than 5 pounds.

So, Nancy \_\_\_\_\_ enough flour to make the pies.

**Try This!** There are 2,000 pounds in 1 **ton**.

Make a table that relates tons and pounds.

Tons	Pounds
1	2,000
2	
3	

1 ton is \_\_\_\_\_ times as heavy as 1 pound.

Name \_\_\_\_\_

## Share and Show



1. 4 tons = \_\_\_\_\_ pounds

Think:  $4 \text{ tons} \times \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

Complete.

2. 5 tons = \_\_\_\_\_ pounds

3. 6 pounds = \_\_\_\_\_ ounces

### Customary Units of Weight

1 pound (lb) = 16 ounces (oz)  
1 ton (T) = 2,000 pounds

## On Your Own

Complete.

4. 7 pounds = \_\_\_\_\_ ounces

5. 6 tons = \_\_\_\_\_ pounds

### MATHEMATICAL PRACTICE 4

**Use Symbols Algebra** Compare using  $>$ ,  $<$ , or  $=$ .

6. 1 pound  15 ounces

7. 2 tons  2 pounds

Math Talk

### MATHEMATICAL PRACTICES 4

**Write an Equation** What equation can you use to solve Exercise 4? Explain.

## Problem Solving • Applications



8. A landscaping company ordered 8 tons of gravel. It sells the gravel in 50-pound bags. How many pounds of gravel did the company order?

\_\_\_\_\_

9. **THINK SMARTER** If you could draw a number line that shows the relationship between tons and pounds, what would it look like? Explain.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



10. **THINK SMARTER** Write the symbol that compares the weights correctly.



160 ounces \_\_\_\_\_ 10 pounds

600 pounds \_\_\_\_\_ 3 tons

Name \_\_\_\_\_

## Customary Units of Liquid Volume

**Liquid volume** is the measure of the space a liquid occupies. Some basic units for measuring liquid volume are **gallons, half gallons, quarts, pints, cups,** and **fluid ounces**. The table at the right shows the relationships among some units of liquid volume.

1 cup = 8 fluid ounces
1 pint = 2 cups
1 quart = 2 pints
1 half gallon = 2 quarts
1 gallon = 4 quarts

**How does the size of a gallon compare to the size of a pint?**

**Step 1** Use the information in the table.

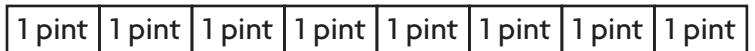
Draw a bar to represent 1 gallon.



**Step 2** The table shows that 1 gallon is equal to 4 quarts. Draw a bar to show 4 quarts.



**Step 3** The table shows that 1 quart is equal to 2 pints. Draw a bar to show 2 pints for each of the 4 quarts.



**Step 4** Compare the size of 1 gallon to the size of 1 pint.

There are 8 pints in 1 gallon.

So, 1 gallon is 8 times as much as 1 pint.

**Complete. Draw a model to help.**

1. 2 quarts = \_\_\_\_\_ pints

2. 1 gallon = \_\_\_\_\_ cups

3. 1 pint = \_\_\_\_\_ fluid ounces

4. 3 pints = \_\_\_\_\_ cups

5. 3 quarts = \_\_\_\_\_ cups

6. 1 half gallon = \_\_\_\_\_ pints

Name \_\_\_\_\_

## Customary Units of Liquid Volume

**Essential Question** How can you use models to compare customary units of liquid volume?



Measurement and Data—4.MD.A.1  
Also 4.MD.A.2

**MATHEMATICAL PRACTICES**  
MP3, MP7, MP8

### Unlock the Problem

**Liquid volume** is the measure of the space a liquid occupies. Some basic units for measuring liquid volume are **gallons**, **half gallons**, **quarts**, **pints**, and **cups**.

The bars below model the relationships among some units of liquid volume. The largest units are gallons. The smallest units are **fluid ounces**.

1 cup = 8 fluid ounces  
 1 pint = 2 cups   
 1 quart = 4 cups

1 gallon

1 gallon															
1 half gallon								1 half gallon							
1 quart				1 quart				1 quart				1 quart			
1 pint		1 pint		1 pint		1 pint		1 pint		1 pint		1 pint		1 pint	
1 cup	1 cup	1 cup	1 cup	1 cup	1 cup	1 cup	1 cup	1 cup	1 cup	1 cup	1 cup	1 cup	1 cup	1 cup	1 cup
8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
fluid	fluid	fluid	fluid	fluid	fluid	fluid	fluid	fluid	fluid	fluid	fluid	fluid	fluid	fluid	fluid
ounces	ounces	ounces	ounces	ounces	ounces	ounces	ounces	ounces	ounces	ounces	ounces	ounces	ounces	ounces	ounces

**Example** How does the size of a gallon compare to the size of a quart?



**MATHEMATICAL PRACTICES 7**

**Look for a Pattern**  
Describe the pattern in the units of liquid volume.

**STEP 1** Draw two bars that represent this relationship. One bar should show gallons and the other bar should show quarts.

**STEP 2** Shade 1 gallon on one bar and shade 1 quart on the other bar.

**STEP 3** Compare the size of 1 gallon to the size of 1 quart.

So, 1 gallon is \_\_\_\_\_ times as much as 1 quart.

**Example** Compare measures.



Serena needs to make 3 gallons of lemonade for the lemonade sale. She has a powder mix that makes 350 fluid ounces of lemonade. How can she decide if she has enough powder mix?

**STEP 1** Use the model on page 659. Find the relationship between gallons and fluid ounces.

1 gallon = \_\_\_\_\_ cups

1 cup = \_\_\_\_\_ fluid ounces

1 gallon = \_\_\_\_\_ cups  $\times$  \_\_\_\_\_ fluid ounces

1 gallon = \_\_\_\_\_ fluid ounces

**STEP 2** Make a table that relates gallons and fluid ounces.

Gallons	Fluid Ounces
1	128
2	
3	

**Think:**

1 gallon = 128 fluid ounces

2 gallons  $\times$  128 = \_\_\_\_\_ fluid ounces

3 gallons  $\times$  128 = \_\_\_\_\_ fluid ounces

**STEP 3** Compare 350 fluid ounces and 3 gallons.

350 fluid ounces

3 gallons



**Think:** Write each measure in fluid ounces and compare using  $<$ ,  $>$ , or  $=$ .



Serena has enough mix to make 350 fluid ounces. She needs to make 3 gallons of lemonade.

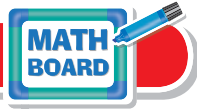
350 fluid ounces is \_\_\_\_\_ than 3 gallons.

So, Serena \_\_\_\_\_ enough mix to make 3 gallons of lemonade.

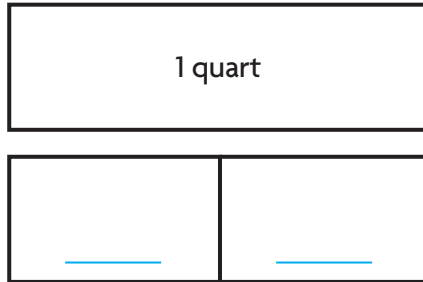


Name \_\_\_\_\_

## Share and Show



1. Compare the size of a quart to the size of a pint.  
Use a model to help.



### Customary Units of Liquid Volume

1 cup (c) = 8 fluid ounces (fl oz)  
 1 pint (pt) = 2 cups  
 1 quart (qt) = 2 pints  
 1 quart (qt) = 4 cups  
 1 gallon (gal) = 4 quarts  
 1 gallon (gal) = 8 pints  
 1 gallon (gal) = 16 cups

1 quart is \_\_\_\_\_ times as much as \_\_\_\_\_ pint.

Complete.

2. 2 pints = \_\_\_\_\_ cups      3. 3 gallons = \_\_\_\_\_ quarts      4. 6 quarts = \_\_\_\_\_ cups



### MATHEMATICAL PRACTICES 6

**Make Connections** Explain how the conversion chart above relates to the bar model in Exercise 1.

## On Your Own

Use a model or *iTools* to complete.

5. 4 gallons = \_\_\_\_\_ pints      6. 5 cups = \_\_\_\_\_ fluid ounces

**MATHEMATICAL PRACTICE 4** Use Symbols Algebra Compare using  $>$ ,  $<$ , or  $=$ .

7. 2 gallons  32 cups      8. 4 pints  6 cups      9. 5 quarts  11 pints

## Problem Solving • Applications



10. **THINK SMARTER** A soccer team has 25 players. The team's thermos holds 4 gallons of water. If the thermos is full, is there enough water for each player to have 2 cups? Explain. Make a table to help.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



Gallons	Cups
1	
2	
3	
4	

Name \_\_\_\_\_

## Line Plots

Howard gave a piece of paper with several survey questions to his friends. Then he made a list to show how long it took for his friends to answer the survey. Howard wants to know how many surveys took longer than  $\frac{2}{12}$  hour.

### Time for Survey Answers (in hours)

$\frac{1}{12}$   $\frac{3}{12}$   $\frac{1}{12}$   $\frac{2}{12}$   $\frac{6}{12}$   $\frac{3}{12}$   $\frac{5}{12}$

**Make a line plot to show the data.**

**Step 1** Order the data from least to greatest.

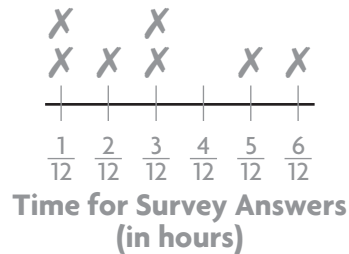
$\frac{1}{12}$   $\frac{1}{12}$   $\frac{2}{12}$   $\frac{3}{12}$   $\frac{3}{12}$   $\frac{5}{12}$   $\frac{6}{12}$

**Step 2** Make a tally table of the data.

Survey	
Time (in hours)	Tally
$\frac{1}{12}$	
$\frac{2}{12}$	
$\frac{3}{12}$	
$\frac{5}{12}$	
$\frac{6}{12}$	

**Step 3** Label the fractions of an hour on the number line from least to greatest. Notice that  $\frac{4}{12}$  is included even though it is not in the data.

**Step 4** Plot an X above the number line for each piece of data. Write a title for the line plot.



**Step 5** Count the number of Xs that represent data points greater than  $\frac{2}{12}$  hour.

There are 4 data points greater than  $\frac{2}{12}$  hour.

So, 4 surveys took more than  $\frac{2}{12}$  hour.

**Use the line plot above for 1 and 2.**

- How many of the surveys that Howard gave to his friends were answered? \_\_\_\_\_
- What is the difference in hours between the longest time and the shortest time that it took Howard's friends to answer the survey?

Name \_\_\_\_\_

## Line Plots

**Essential Question** How can you make and interpret line plots with fractional data?



Measurement and Data—4.MD.B.4  
Also 4.MD.A.2

**MATHEMATICAL PRACTICES**  
MP4, MP5, MP7

### Unlock the Problem

The data show the lengths of the buttons in Jen’s collection. For an art project, she wants to know how many buttons are longer than  $\frac{1}{4}$  inch.

You can use a line plot to solve the problem. A **line plot** is a graph that shows the frequency of data along a number line.

Length of Buttons in Jen’s Collection (in inches)	
$\frac{1}{4}$	$\frac{3}{4}$
$\frac{1}{4}$	$\frac{1}{4}$
$\frac{4}{4}$	$\frac{1}{4}$
$\frac{4}{4}$	$\frac{4}{4}$



Make a line plot to show the data.

### Example 1

**STEP 1** Order the data from least to greatest length and complete the tally table.

---

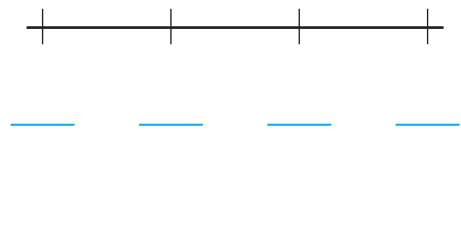


---

**STEP 2** Label the fraction lengths on the number line below from the least value of the data to the greatest.

---

**STEP 3** Plot an X above the number line for each data point. Write a title for the line plot.



So, \_\_\_\_\_ buttons are longer than  $\frac{1}{4}$  inch.

Buttons in Jen’s Collection	
Length (in inches)	Tally
$\frac{1}{4}$	
$\frac{3}{4}$	
$\frac{4}{4}$	



**MATHEMATICAL PRACTICES 4**

**Use Models** Explain how you labeled the numbers on the number line in Step 2.

**Think:** To find the difference, subtract the numerators. The denominators stay the same.

- How many buttons are in Jen’s collection? \_\_\_\_\_
- What is the difference in length between the longest button and the shortest button in Jen’s collection? \_\_\_\_\_

## Example 2

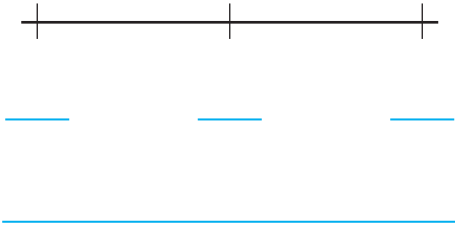
Some of the students in Ms. Lee's class walk to school. The data show the distances these students walk. What distance do most students walk?

Make a line plot to show the data.

**STEP 1** Order the data from least to greatest distance and complete the tally table.

**STEP 2** Label the fraction lengths on the number line below from the least value of the data to the greatest.

**STEP 3** Plot an  $X$  above the number line for each data point. Write a title for the line plot.



So, most students walk \_\_\_\_\_.

Distance Students Walk to School (in miles)
$\frac{1}{2}, \frac{1}{2}, \frac{1}{4}, \frac{3}{4}, \frac{1}{4}, \frac{1}{2}, \frac{1}{2}$

Distance Students Walk to School	
Distance (in miles)	Tally

3. How many more students walk  $\frac{1}{2}$  mile than  $\frac{1}{4}$  mile to school?

\_\_\_\_\_

4. What is the difference between the longest distance and the shortest distance that students walk?

\_\_\_\_\_

5. What if a new student joins Ms. Lee's class who walks  $\frac{3}{4}$  mile to school? How would the line plot change? Explain.

\_\_\_\_\_

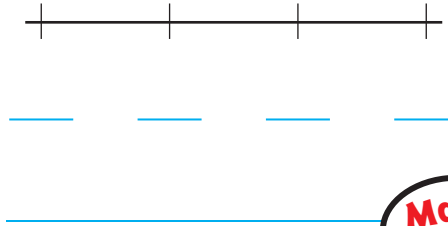
## Share and Show



1. A food critic collected data on the lengths of time customers waited for their food. Order the data from least to greatest time. Make a tally table and a line plot to show the data.

Time Customers Waited for Food	
Time (in hours)	Tally

Time Customers Waited for Food (in hours)
$\frac{1}{2}, \frac{1}{4}, \frac{3}{4}, \frac{1}{4}, \frac{1}{4}, \frac{1}{2}, 1$



### MATHEMATICAL PRACTICES 4

**Use Graphs** Explain how the line plot helped you answer the question for Exercise 2.

Use your line plot for 2 and 3.

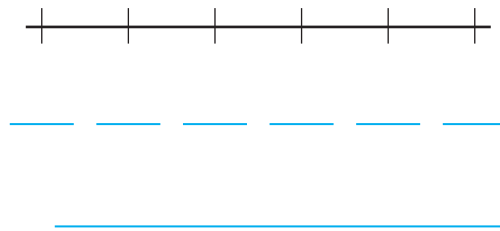
2. On how many customers did the food critic collect data? \_\_\_\_\_
3. What is the difference between the longest time and the shortest time that customers waited? \_\_\_\_\_

## On Your Own

4. **MATHEMATICAL PRACTICE 4 Use Models** The data show the lengths of the ribbons Mia used to wrap packages. Make a tally table and a line plot to show the data.

Ribbon Used to Wrap Packages	
Length (in yards)	Tally

Ribbon Length Used to Wrap Packages (in yards)
$\frac{1}{6}, \frac{2}{6}, \frac{5}{6}, \frac{3}{6}, \frac{2}{6}, \frac{6}{6}, \frac{3}{6}, \frac{2}{6}$



5. What is the difference in length between the longest ribbon and the shortest ribbon Mia used? \_\_\_\_\_

Name: \_\_\_\_\_

## The First & Fourth Amendments

1. If The United States did not have The First Amendment, how do you think it would be for us right now, with everything that is going on across the world (COVID 19)? How do you think the news and media would be giving us information about COVID 19? How do you think people would react? Would you see or hear about everyone's opinions and beliefs about the Pandemic?

---

---

---

---

---

---

---

2. If the United States government took away our Fourth Amendment, how do you think this would affect your life at home, school, and hanging out with your friends in public?

---

---

---

---

---

---

---

Name: \_\_\_\_\_

## The Bill of Rights

### Opinion: The First & Fourth Amendments

When the leaders of the newly formed United States finished writing the Constitution, their work wasn't done. The thirteen states had to agree to it.

The thirteen states wanted to add a set of amendments describing the rights of all people. Ten rights, called the Bill of Rights, were added to the Constitution in 1791.

**Here we will learn about the First Amendment and the Fourth Amendment. Be sure to use the Vocabulary Key, at the end of each section, to look up words that may be unfamiliar to you (highlighted in bold.)**

### The First Amendment

“Congress shall make no law respecting an establishment of religion, or **prohibiting** the free exercise thereof; or **abridging** the freedom of speech, or of the press; or the right of the people peaceably to **assemble**, and to petition the Government for a **redress** of **grievances**.”

1. **People have the right to practice any kind of religion.**

Is it important to you to live in a country that allows people to practice any faith? Explain.

---

---

---

---

2. **People have the right to say or write what they want without government review.**

Why is it important to live in a country with free speech? How does this impact you? Be sure to answer both questions below:

---

---

---

---



## The First Amendment

3. **People have the right to form groups, and protest policies they don't agree with.**

Is it important to you to live in a country that allows people to disagree with leaders and fellow citizens? Why or why not?

---

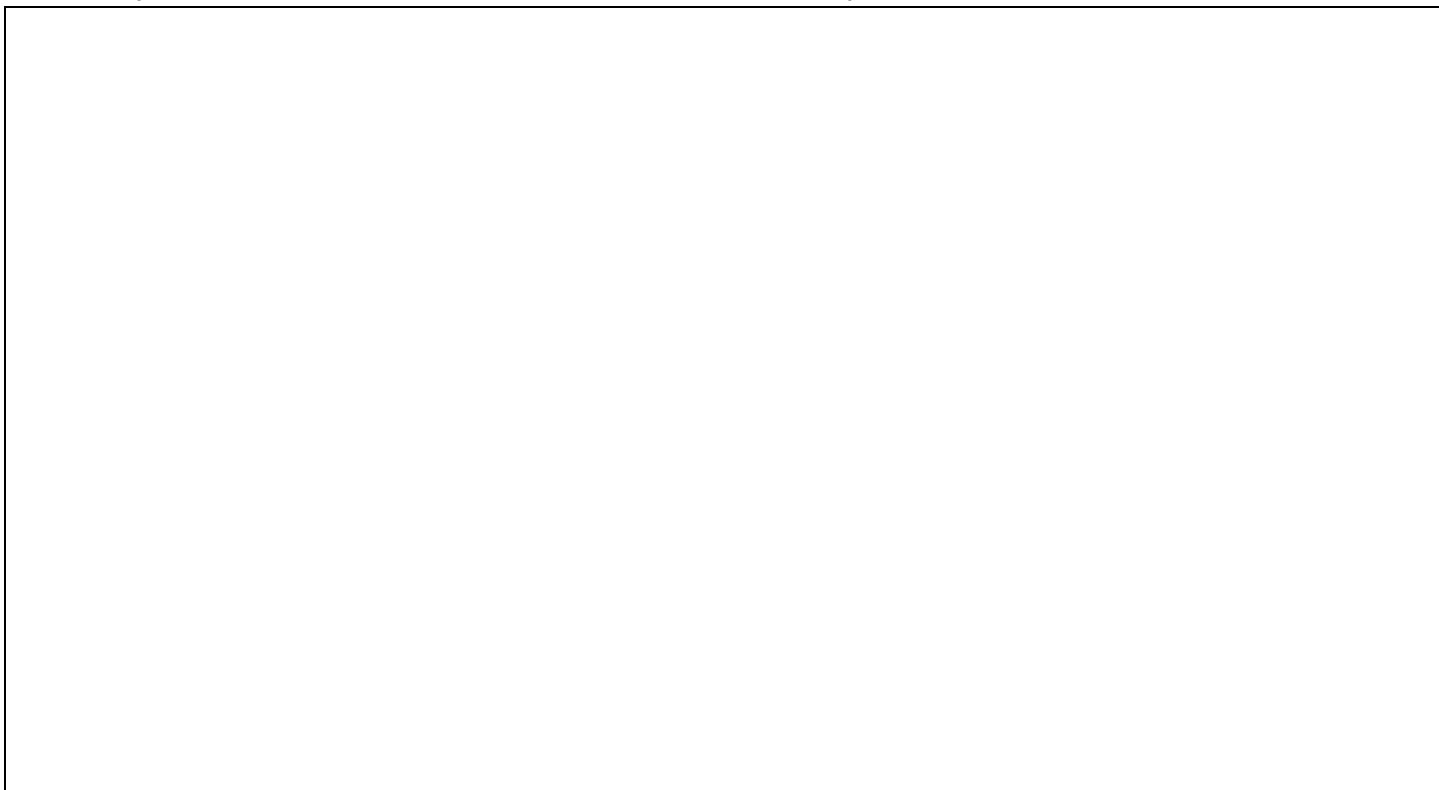
---

---

---

## Picture This

Now that you have read about the First Amendment, how would you illustrate it?



## ★ Vocabulary Key: First Amendment

**abridge**: to shorten without removing basic contents.

**assemble**: to gather (things or persons) into a group.

**grievance**: an injustice considered a cause for complaint, or the complaint resulting from such an injustice.

**prohibit**: to forbid (an action) by authority.

**redress**: compensation or reparation; amends.

## The Fourth Amendment

“The right of the people to be secure in their persons, houses, papers, and effects, against unreasonable searches and **seizures**, shall not be **violated**, and no Warrants shall issue, but upon probable cause, supported by Oath or **affirmation**, and particularly describing the place to be searched, and the persons or things to be seized.”

4. Why do you think this amendment is important? Explain below.

---

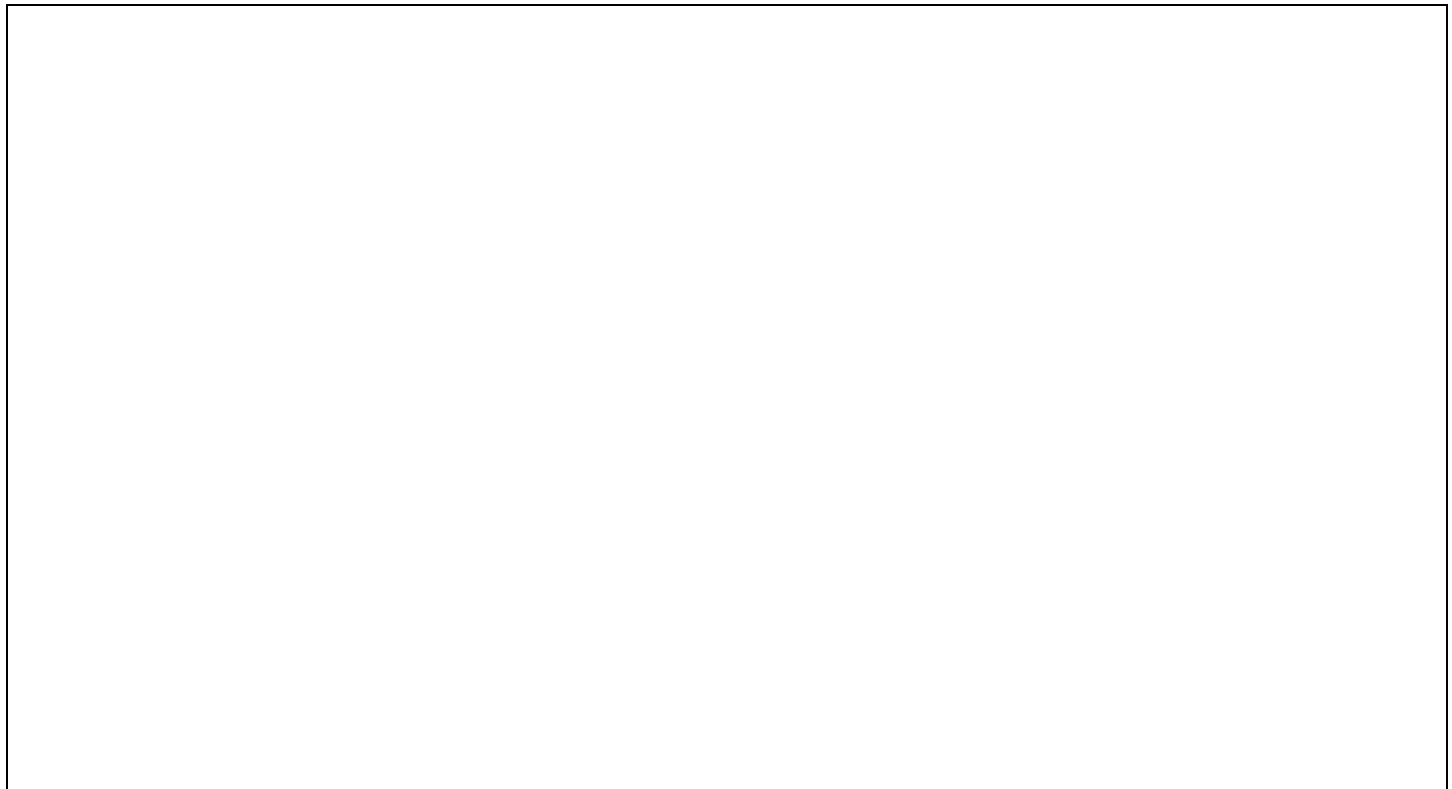
---

---

---

## Picture This

Now that you have read about the Fourth Amendment, how would you illustrate it?



## ★ Vocabulary Key: Fourth Amendment

**affirmation**: the act of firmly declaring or maintaining something as true.

**seizures**: a taking, esp. of property, by legal force.

**violate**: to break or breach (a law, contract, covenant, or the like)

# Local and State Governments Movie Transcript

## Local and State Governments

*Movie title reads, "Local and State Governments, with Annie and Moby."*

*A young girl, Annie, posts a sign on a classroom wall. The poster reads "MEET OUR MAYOR" and "FRIDAY 2:00." Her robot friend Moby is sitting at a table in the classroom, writing something on a piece of paper. Moby looks up.*

**MOBY:** Beep.

*Moby smiles.*

**ANNIE:** The mayor's coming to talk to students.

**MOBY:** Beep!

*Moby's smile fades, and he shrugs his shoulders. He continues writing.*

**ANNIE:** But, Moby, it's important to be involved in our local government! Hmm ... what *is* a local government? A government is a group of people that sets rules and runs a community.

*The word wall reads: A government is a group of people that sets rules and runs a community.*

**MOBY:** Beep!

*Moby holds up a poster with a picture of his head embellished by a starburst pattern. The poster reads, "ELECT MOBY."*

**ANNIE:** Right, Moby! We have a student government that helps improve our school.

*A girl is standing in front of a blackboard in a classroom. She is wearing an ID labeled "class president." Moby is among a group of children listening to the class president. Some of the children raise their hands intermittently. Text on the blackboard reads: Ideas. 1. Clean-up day. 2. Bake sale. 3. Food drive.*

**ANNIE:** When something is local, it belongs to a certain area, like a town or city.

*Onscreen, images show a rural road and a city skyline.*

**MOBY:** Beep?

**ANNIE:** The local government can do a *ton* of stuff for a community!

*Annie and Moby are walking down a sidewalk along a road. They pass by a few houses on either of the road.*

**ANNIE:** It can run schools, libraries, and parks.

*The screen divides into three parts. Images show a red schoolhouse, a library, and a park bench in a grassy field.*

**ANNIE:** It can also organize public transportation, like buses and subways, keep streets clean, and provide services to keep people safe.

*Images show a city bus is driving past buildings, and a subway train pulling into a station. The scene changes to show a sanitation, a police officer, a paramedic, and a fireman.*

**ANNIE:** The local government also passes laws to keep everyone safe.

*Onscreen, an image shows a storefront door on a street with people walking by. The sign reads “NO SMOKING” and “CITY HEALTH LAW” and has two crossed-out cigarette icons.*

**MOBY:** Beep!

*The scene changes to a city intersection. A policewoman blows a whistle and holds her hand up in a stop gesture. Annie and Moby walk across a crosswalk in front of the policewoman, who is waving them forward with one hand.*

**ANNIE:** You’re right! It takes a lot of work to run a community.

*Annie and Moby pass by a construction crew digging up the road.*

**ANNIE:** People and businesses pay taxes to help pay for all the services.

*A clerk is scanning grocery items at a register while Annie and Moby peer in through a window. The video zooms in on the receipt as it is printed from the register. The receipt shows five items and their prices, followed by a line for the tax and then a line for the total. The tax is listed as 0.45. The tax line is circled in red.*

**MOBY:** Beep?

**ANNIE:** A tax is a fee paid to the government. Hmm ... who leads the local government?

**MOBY:** Beep?

*Annie and Moby walk up to the back of crowd that is gathered around the steps of a building. There are five people at the front facing the crowd. Four are sitting in chairs, while the fifth is standing at a podium and speaking into a microphone.*

**ANNIE:** That's the mayor, Moby. The mayor is an elected leader of a town or city. People learn about concerns in their communities, and they vote for the person they think will make the best mayor.

*An image shows Annie's grandpop sitting on a sofa and reading a newspaper. One headline reads, "SENIOR CENTER TO CLOSE." The other headline reads, "LOCAL GRANDPOP UPSET." The scene switches to show people voting. Grandpop is waiting to vote and looks agitated. He is tapping his foot and scowling.*

**ANNIE:** The mayor has an important job! The mayor solves problems in the community.

*The video returns to the crowd of people listening to the mayor. The mayor is answering questions from the audience members.*

**ANNIE:** Many cities and towns also elect people to a council.

**MOBY:** Beep?

**ANNIE:** A council is a group of leaders that makes laws and helps run the community. The mayor and the council work together to make sure the community runs smoothly.

*The word wall reads, council: a group of leaders that makes laws and helps run the community.*

*The mayor and the council are now sitting at a long table with other people facing them. A sign behind them reads, "CITY COUNCIL."*

**ANNIE:** They can also work with the county government.

**MOBY:** Beep.

**ANNIE:** A county is a group of communities near each other in a state. Each county can have local elected leaders who can work with the state government.

*An outline map of Florida starts empty and fills in with a color-coded map of counties until all 67 counties are present.*

**ANNIE:** But what does the state government do? Each state has its own government that sets laws.

*Annie's notebook reads: What does the state government do? Annie is walking past a state capitol building. Moby is standing in front of the building, holding up a sign that reads, "MORE PIES FOR MOBY."*

**ANNIE:** Leaders from communities all over the state meet in the state capital.

*Two people dressed in suits come into view from the side and walk into the building during the narration.*

**ANNIE:** They write and vote on laws to pass on to the governor.



*Legislators inside the capitol building are voting by show of hands. There are seven legislators in view, each sitting at a separate desk. Four of them have their hands raised, and three do not.*

**ANNIE:** The governor is an elected leader of the state government. One of the governor's jobs is to decide what state laws to approve.

*The word wall reads, governor: an elected leader of the state government. An image shows the governor is sitting at a desk. A piece of paper is handed to him. He reads it briefly and then signs it.*

**ANNIE:** State governments also have judges who decide if those laws agree with the state and national constitution.

*Eight men and women wearing black robes appear.*

**ANNIE:** The state government decides how to spend the state budget, or money for the year.

*Annie and Moby are standing outside in front of the capitol again. Moby blinks, and his eyeballs are replaced by dollar signs.*

**MOBY:** Beep?

**ANNIE:** Well, the state government can spend money on protecting the state's land and water, building roads that connect communities across the state, running state colleges and universities and state hospitals, too.

*Onscreen, images show each of the examples Annie lists.*

**ANNIE:** The state government also sets laws that keep people safe.

**MOBY:** Beep?

**ANNIE:** Well, in our state, you *have* to wear a helmet to ride a bike if you're under 14.

*Onscreen, a boy wearing a bicycle helmet is riding on a sidewalk, passing quickly by houses in the background.*

**ANNIE:** But in other states you've got to wear one if you're under 18.

*An older girl enters the scene on a bicycle and catches up to the boy. She is also wearing a helmet.*

**ANNIE:** Different states can have different laws. Anyway, Moby, you should meet the mayor and tell her how to improve *our* community!

*Annie and Moby are back in the classroom, standing in front of the "MEET OUR MAYOR" poster. A printed piece of paper comes out of Moby's mouth.*

**MOBY:** Beep! Beep!

*Moby shows Annie the paper and then points to the sky.*

**ANNIE:** You want a subway that goes to the moon?

**MOBY:** Beep.

**ANNIE:** Uh, I'm not sure the mayor can do that, Moby.

*Moby scowls and walks away.*

**MOBY:** Beep!

Name: \_\_\_\_\_

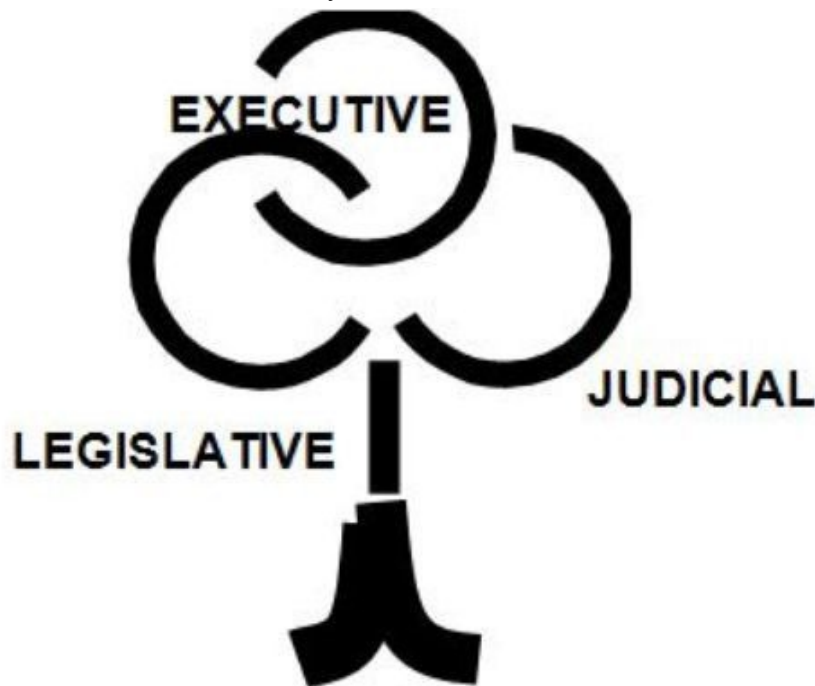
## Brainpop, Jr Quiz on Local & State Governments

Directions: Circle or highlight the correct answer. \*\*Feel free to look back at the video or transcript to help you!

1. Who is the elected leader of a **state** government?
  - a) A principal
  - b) A governor
  - c) A mayor
  - d) A city council member
  
2. What is a tax?
  - a) a fee paid to the government to help pay for services
  - b) a service that helps keep people safe
  - c) a person who leads a community
  - d) a school where people learn about the government
  
3. Which happens LAST?
  - a) There are too many students in the old school
  - b) A new school is built in the community
  - c) Community members discuss the need for a new school
  - d) There is a vote to decide if money should be spent on a new school
  
4. Which is the responsibility of the local government?
  - a) Build roads to connect different states
  - b) Run a fire department for the town
  - c) Build hospitals and universities for the state
  - d) Protect state land and water
  
5. Who leads a **local** government?
  - a) teachers and students
  - b) the governor and the people he or she appoints
  - c) lawyers and doctors
  - d) the mayor and the city council

# American Government - The Branches of Government

by ReadWorks



Think of the United States government as a tree. What is the thickest part of a tree? The trunk. In our government, the people are the trunk. What are the branches?

The Constitution establishes three branches of government. These branches are the legislative branch, the executive branch, and the judicial branch. Each branch has only the power given to it in the Constitution. This separation is to make sure that no one part of government ever becomes too strong. Think of the tree again. What would happen if one branch of a tree were huge and the others were just little twigs? The whole tree could topple!

To make sure that our government does not fall apart, power is carefully balanced between the branches of government. Each branch of government has a way to curb, or "check," the power of the other two branches. For example, imagine the President does not agree with a law passed by Congress. He can veto it so it never goes into effect. If the law passes, and takes away someone's rights, the Supreme Court can rule it is illegal. The legislative, executive, and judicial branches all check up on each other in different ways.

These two important principles are called "separation of power" and "checks and balances." Together, they help make sure the government works properly and that no one government group, or government official, becomes too powerful.

Name: \_\_\_\_\_ Date: \_\_\_\_\_

1. What established the three branches of U.S. government?

- A. the president
- B. the Constitution
- C. the king of England
- D. the Supreme Court

2. This passage uses an analogy of a tree to

- A. show that government is a part of nature, too.
- B. help the reader understand the parts of government.
- C. show the reader how cases reach the Supreme Court.
- D. explain how government has roots and grows.

3. Based on this passage, what can prevent the legislative branch from passing a law that nobody else likes?

- A. The Supreme Court has to give approval to all laws first.
- B. The legislative branch cannot pass laws, only the President can.
- C. The President could veto that law so it wouldn't take effect.
- D. The judicial branch would elect a brand new legislative branch.

4. Read the following sentence: "If the law passes, and takes away someone's rights, the Supreme Court can **rule** it is illegal."

In this sentence the word **rule** means

- A. to measure
- B. to hate
- C. to decide
- D. to suggest

5. The passage "The Branches of Government" is mostly about

- A. trees that are important to the United States
- B. famous moments in the history of U.S. government
- C. the role and history of the Supreme Court
- D. different parts of government and how they work together

6. What are the three branches of the United States government?

---

---

---

7. Describe a specific situation where the principle of checks and balances could be used for the good of the people.

---

---

---

8. The question below is an incomplete sentence. Choose the answer that best completes the sentence.

There are checks and balances in the United States government, and \_\_\_\_\_ no one person can become too powerful.

- A. previously
- B. as a result
- C. after
- D. on the other hand

Name: \_\_\_\_\_

## Which Branch of the Government would you rather work for: Legislative, Executive, or Judicial?

**Directions:** After watching the video, choose which branch of the government you would rather work for and explain why. Be sure to you COMPLETE sentences!

---

---

---

---

---

---

---

---

---

---





# CAPTAIN AMERICA WARM-UP



**Jog in Place: 30 Seconds**



**Plank Position for 15 Seconds**



**10 Star Jumps**



**Hold Push--UP Position: 25 Seconds**



**Self-Defense Punches: 15 Each Arm**



**10 Parallel Squats**



**Boat Position: 20 Seconds**

**Almost Done, Captain America! Repeat thr warm-up 1 more time.**






Name: \_\_\_\_\_

You know all about being a student. Now it's your chance to try being a teacher. Today you're going to teach an adult family member the first two Calming-Down Steps, just like you learned in class. Follow the "lesson plan" below.

Read the following information and questions out loud to your adult. Then help your adult answer the questions. Refer to the Calming-Down Steps as needed.



**How to Calm Down**  
 Stop—use your signal  
 Name your feeling  
 Calm down:

- Breathe
- Count
- Use positive self-talk

We all have strong feelings that can get out of control sometimes. When are some times you might have strong feelings?

\_\_\_\_\_

\_\_\_\_\_

When you have strong feelings, your body sends messages to the part of your brain that just reacts. That's why you need to switch on the thinking part of your brain—so you don't just react and do something you'll regret later. You can do this by using the first two Calming-Down Steps: Stop—use your signal and Name your feeling.

The first thing you need to do when you feel yourself losing control of your feelings is tell your mind and body to stop. What is a signal you can say to yourself to stop yourself from reacting without thinking?

\_\_\_\_\_

After you give yourself a signal, the next step is to name your feeling. In the following situations, say your stop signal out loud, then name your feeling.

When I come home, the house is a mess. \_\_\_\_\_

I can't get my television to work. \_\_\_\_\_

A friend just canceled our dinner plans for the third time this month. \_\_\_\_\_

Next time you're having strong feelings that are getting out of control, what are the first two things you should do?

1. \_\_\_\_\_

2. \_\_\_\_\_

This homework assignment was completed on \_\_\_\_\_ | \_\_\_\_\_

(DATE) (ADULT SIGNATURE)