

# Mean

Name \_\_\_\_\_ Class \_\_\_\_\_ Date \_\_\_\_\_

## GET STARTED

1.  $12 + 4 + 1 + 5 =$  \_\_\_\_\_

2. **3 7 2**

a.  $3 + 7 + 2 =$  \_\_\_\_\_

b. There are \_\_\_\_\_ data values in the set.

c. mean = \_\_\_\_\_  $\div$  \_\_\_\_\_ = \_\_\_\_\_

3. **5 9 2 4**

a.  $5 + 9 + 2 + 4 =$  \_\_\_\_\_

b. There are \_\_\_\_\_ data values in the set.

c. mean = \_\_\_\_\_  $\div$  \_\_\_\_\_ = \_\_\_\_\_

4. 13, 6, 20, 8, 3

a.  $13 + 6 + 20 + 8 + 3 =$  \_\_\_\_\_

b. There are \_\_\_\_\_ data values in the set.

c. mean = \_\_\_\_\_  $\div$  \_\_\_\_\_ = \_\_\_\_\_

Find the mean of 3, 8, 1, 6, and 2.

Model each data value with a stack of connecting cubes.



Rearrange the cubes so each stack has the same number of cubes.



How many cubes are in each stack? \_\_\_\_\_

The mean of 3, 8, 1, 6, and 2 is \_\_\_\_\_.

**BUILD  
THE  
CONCEPT**

## Lesson 1

### TRY IT TOGETHER

Find the mean of each set of data.

5 3, 20, 7, 10

a.  $\underline{\quad} + \underline{\quad} + \underline{\quad} + \underline{\quad} = \underline{\quad}$

b.  $\underline{\quad} \div \underline{\quad} = \underline{\quad}$

mean =  $\underline{\quad}$

6 24, 1, 6, 15, 9

a.  $\underline{\quad} + \underline{\quad} + \underline{\quad} + \underline{\quad} + \underline{\quad} = \underline{\quad}$

b.  $\underline{\quad} \div \underline{\quad} = \underline{\quad}$

mean =  $\underline{\quad}$

7 36, 5, 22

a.  $\underline{\quad} + \underline{\quad} + \underline{\quad} = \underline{\quad}$

b.  $\underline{\quad} \div \underline{\quad} = \underline{\quad}$

mean =  $\underline{\quad}$

### WORK ON YOUR OWN

Find the Mean of a Set of Data

Using Symbols

1. Data set: 5, 8, 9, 6, 7

$$5 + 8 + 9 + 6 + 7 = 35$$

2. Number of data values: 5

$$3. 35 \div 5 = 7$$

$$\text{Mean} = 7$$

Using Words

Find the sum of the data values in the set.

Count the number of data values in the set.

Divide the sum of the data values by the number of data values in the set.

HOW  
TO

## Median

Name \_\_\_\_\_ Class \_\_\_\_\_ Date \_\_\_\_\_

# GET STARTED

**1 7 13 4 6 10**

a.  $7 + 13 + 4 + 6 + 10 =$


mean =  $\frac{\text{sum of all values}}{\text{number of values}}$  =

b.

\_\_\_\_\_

↑    ↑


least                                      greatest

2 a. 

**b.** An \_\_\_\_\_ number of values is in the set.

c. median =

3 5 2 8 3

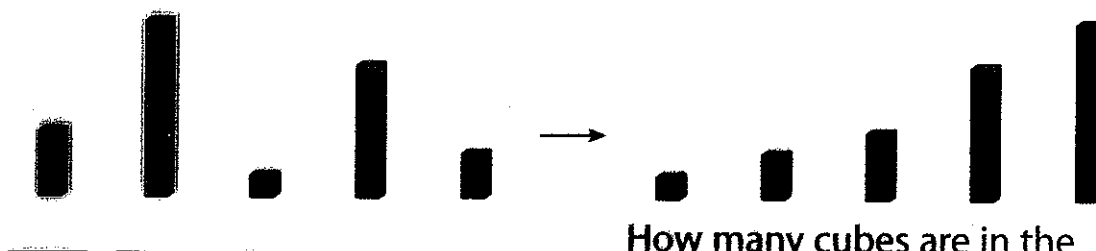
**a.** 

**b.** An \_\_\_\_\_ number of values  
is in the set.

c.  $3 + 5 = \underline{\hspace{2cm}}$   
median =  $\underline{\hspace{2cm}} \div \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

**Use connecting cubes to find the median of 3, 8, 1, 6, and 2.**

**Arrange the stacks in order from shortest to tallest.**



**How many cubes are in the middle stack?**

The median of 3, 8, 1, 6, and 2 is \_\_\_\_\_.

## BUILD THE CONCEPT

## TRY IT TOGETHER

Find the median of each set of data.

④ 6, 15, 18, 2, 8

order = \_\_\_\_\_

median = \_\_\_\_\_

⑤ 56, 1, 12, 28

order = \_\_\_\_\_

\_\_\_\_\_ + \_\_\_\_\_ = \_\_\_\_\_

\_\_\_\_\_ ÷ \_\_\_\_\_ = \_\_\_\_\_

median = \_\_\_\_\_

⑥ 71, 14, 63

order = \_\_\_\_\_

median = \_\_\_\_\_

## WORK ON YOUR OWN

Find the Median of a Set of Data

### Using Symbols

1. Data set: 7, 4, 12, 11, 3, 9

Least to greatest:

3, 4, 7, 9, 11, 12

2. Number of values: 6

3. Six is an even number.

3, 4, 7, 9, 11, 12

$7 + 9 = 16$

$16 \div 2 = 8$

median = 8

### Using Words

Write the data values in order from least to greatest.

Count the number of data values in the set.

If the number of values is an odd number, the median is the middle number in the ordered list.

If the number of values is an even number, the median is the mean of the two middle numbers.

HOW TO

# Frequency Tables

Name \_\_\_\_\_ Class \_\_\_\_\_ Date \_\_\_\_\_

## GET STARTED

① 
$$\begin{array}{r} 25 \\ - 17 \\ \hline \end{array}$$

② 17, 25, 16, 26

a. 
$$\begin{array}{r} 17 \\ 25 \\ 16 \\ + 26 \\ \hline \end{array}$$

b. 
$$\overline{) \phantom{0000}}$$

mean = \_\_\_\_\_

- ③ a. How many more mystery books than history books did Ari read?

\_\_\_\_\_ - \_\_\_\_\_ = \_\_\_\_\_ books

- b. What was the mean number of books Ari read last year?

\_\_\_\_\_ + \_\_\_\_\_ + \_\_\_\_\_ + \_\_\_\_\_ = \_\_\_\_\_

\_\_\_\_\_ ÷ \_\_\_\_\_ = \_\_\_\_\_ books

**Books Ari Read Last Year**

| Books   | Number |
|---------|--------|
| History | 17     |
| Mystery | 25     |
| Poetry  | 16     |
| Sports  | 26     |

Use the tally chart to complete the frequency table.

Which fruit had the most votes?

| Favorite Fruit |                 |
|----------------|-----------------|
| Fruit          | Number of Votes |
| Bananas        | IIII            |
| Oranges        | IIII IIII       |
| Peaches        | I               |
| Grapes         | III             |
| Apples         | IIII IIII III   |

| Favorite Fruit |                 |
|----------------|-----------------|
| Fruit          | Number of Votes |
| Bananas        | 4               |
| Oranges        | 9               |
| Peaches        | _____           |
| Grapes         | _____           |
| Apples         | _____           |

\_\_\_\_\_ had the most votes.

**BUILD  
THE  
CONCEPT**

## TRY IT TOGETHER

Solve each problem using the table.

- 4 Which sandwich got the median number of votes?

- 5 a. What is the total number of votes?  
 $\underline{\quad} + \underline{\quad} + \underline{\quad} = \underline{\quad}$  votes

- b. What is the mean number of votes?  
 $\underline{\quad} \div \underline{\quad} = \underline{\quad}$  votes

| Favorite Sandwiches |                 |
|---------------------|-----------------|
| Sandwich            | Number of Votes |
| Cheese              | 7               |
| Turkey              | 8               |
| Tuna Fish           | 3               |

## WORK ON YOUR OWN

### Interpret a Frequency Table

#### Using Symbols

1. How many more students voted for dog than for cat?

| Favorite Pet |                 |
|--------------|-----------------|
| Pet          | Number of Votes |
| Bird         | 7               |
| Cat          | 9               |
| Dog          | 12              |

2. Cat: 9 votes  
 Dog: 12 votes

3.  $12 - 9 = 3$   
 Three more students voted for dog than for cat.

#### Using Words

Find the question.

Find the row or rows of the table that give the information needed to answer the question.

Perform any operations needed to answer the question.



# Pictographs

Name \_\_\_\_\_ Class \_\_\_\_\_ Date \_\_\_\_\_

## GET STARTED

①  $2 \times 10 =$  \_\_\_\_\_

②  $5 \times 5 =$  \_\_\_\_\_

- ③ How many scoops of strawberry ice cream did the ice cream shop sell?

\_\_\_\_\_  $\times$  \_\_\_\_\_ = \_\_\_\_\_ scoops

- ④ Which flavor was sold the most?











\_\_\_\_\_


- ⑤ How many more scoops of vanilla were sold than butter pecan?

\_\_\_\_\_  $\times$  \_\_\_\_\_ = \_\_\_\_\_

\_\_\_\_\_  $\times$  \_\_\_\_\_ = \_\_\_\_\_

\_\_\_\_\_  $-$  \_\_\_\_\_ = \_\_\_\_\_ scoops

| Scoops of Ice Cream Sold |   |
|--------------------------|---|
| Ice Cream                | Number Sold   |
| Vanilla                  |      |
| Strawberry               |     |
| Chocolate                |     |
| Butter Pecan             |    |

Key: Each  = 10 scoops sold







Eight students voted for basketball. Complete the pictograph using this information.

1 star = \_\_\_\_\_ votes

2 stars = \_\_\_\_\_ votes

3 stars = \_\_\_\_\_ votes

4 stars = \_\_\_\_\_ votes

| Favorite Sports |  |
|-----------------|--|
| Sport           | Number of Votes  |
| Baseball        |   |
| Soccer          |    |
| Football        |     |
| Basketball      |  |

Key: Each  = 2 votes

**BUILD  
THE  
CONCEPT**

## TRY IT TOGETHER













Use the pictograph to solve each problem.

- 6 How many votes did golden retrievers and greyhounds get?

$$\begin{array}{r} \underline{\quad} \times \underline{\quad} = \underline{\quad} \\ \underline{\quad} \times \underline{\quad} = \underline{\quad} \\ \underline{\quad} + \underline{\quad} = \underline{\quad} \text{ votes} \end{array}$$

- 7 How many more votes did greyhounds get than cocker spaniels?

$$\begin{array}{r} \underline{\quad} \times \underline{\quad} = \underline{\quad} \\ \underline{\quad} \times \underline{\quad} = \underline{\quad} \\ \underline{\quad} - \underline{\quad} = \underline{\quad} \text{ votes} \end{array}$$

| Favorite Dog     |   |
|------------------|---|
| Dog              | Number of Votes   |
| Cocker Spaniel   |      |
| Golden Retriever |      |
| Greyhound        |       |

Key: Each  = 5 votes

## WORK ON YOUR OWN

### Interpret a Pictograph

Use the pictograph titled Favorite Dog.

#### Using Symbols

1. How many votes did cocker spaniels and greyhounds get?

2. Look at the Cocker Spaniel and Greyhound rows.

3. Cocker Spaniel: 3 pictures  
 $3 \times 5 = 15$

Greyhound: 4 pictures  
 $4 \times 5 = 20$

4.  $15 + 20 = 35$  votes

#### Using Words

Find the question.

Find the row or rows in the pictograph that give the information needed.

For each row, count the pictures in the row. Multiply that number by the number in the key.

Perform any other operations needed to answer the question.

HOW TO



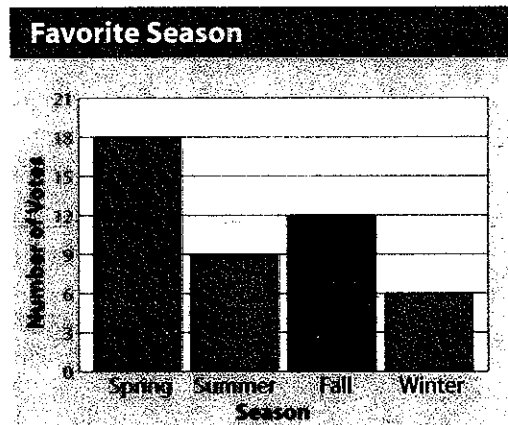
# Bar Graphs

Name \_\_\_\_\_ Class \_\_\_\_\_ Date \_\_\_\_\_

## GET STARTED

1 9 6      2  $13 - 4 =$  \_\_\_\_\_

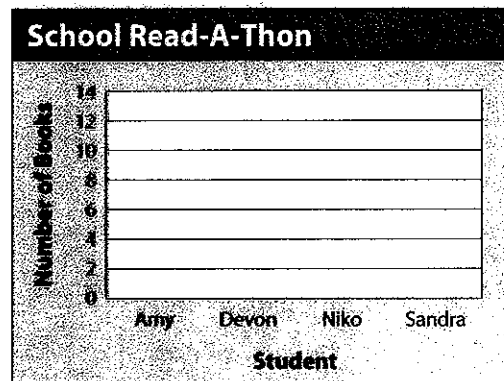
- 3 a. Title: \_\_\_\_\_  
b. Label below graph: \_\_\_\_\_  
c. Categories: \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, and \_\_\_\_\_  
d. Label at left: \_\_\_\_\_



- 4 a. Fall: \_\_\_\_\_ votes  
b. Summer: \_\_\_\_\_ votes  
c. Winter: \_\_\_\_\_ votes  
d. \_\_\_\_\_ got more votes than \_\_\_\_\_.

Use the frequency table to complete the bar graph.

| School Read-A-Thon |                      |
|--------------------|----------------------|
| Student            | Number of Books Read |
| Amy                | 6                    |
| Devon              | 10                   |
| Niko               | 9                    |
| Sandra             | 12                   |



**BUILD  
THE  
CONCEPT**

## TRY IT TOGETHER

Solve each problem using the bar graph.

- 5 a. Which activity was chosen most?

\_\_\_\_\_

- b. Which activity was chosen least?

\_\_\_\_\_

- 6 a. How many votes did the swing get?

\_\_\_\_\_

- b. How many votes did hopscotch get?

\_\_\_\_\_

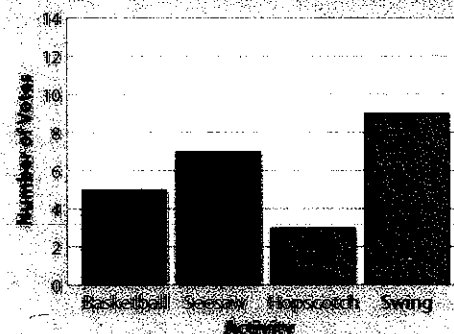
- c. How many more votes did the swing get than hopscotch?

\_\_\_\_\_ - \_\_\_\_\_ = \_\_\_\_\_ votes

- 7 How many votes did basketball and hopscotch get altogether?

\_\_\_\_\_ + \_\_\_\_\_ = \_\_\_\_\_ votes

**Favorite Playground Activity**



## WORK ON YOUR OWN

### Interpret a Bar Graph

Use the bar graph titled Favorite Playground Activity.

#### Using Symbols

1. **Title:** Favorite Playground Activity

2. **Labels:** Activity, Number of Votes

**Categories:** Basketball, Seesaw, Hopscotch, Swing

**Scale:** 0 to 14

#### Using Words

Read the title.

Look at the labels, the categories, and the scale.

3. How many votes did basketball get?  
5 votes

Read across from the top of the bars to the scale to answer questions.

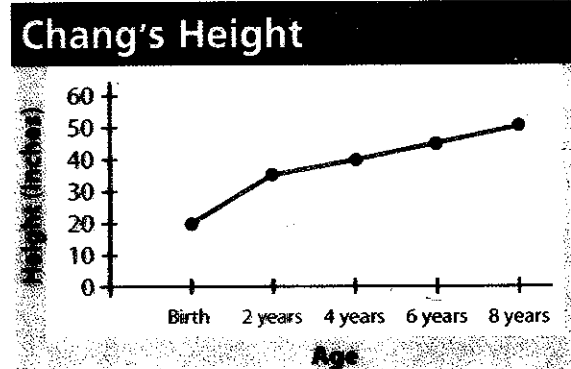
**HOW TO**

# Line Graphs

Name \_\_\_\_\_ Class \_\_\_\_\_ Date \_\_\_\_\_

## GET STARTED

- 1 20 35
- 2 a. Title: \_\_\_\_\_  
b. Label: \_\_\_\_\_  
c. Categories: \_\_\_\_\_  
d. Label: \_\_\_\_\_



- 3 a. 4 years: \_\_\_\_\_ inches  
b. 50 inches: \_\_\_\_\_ years

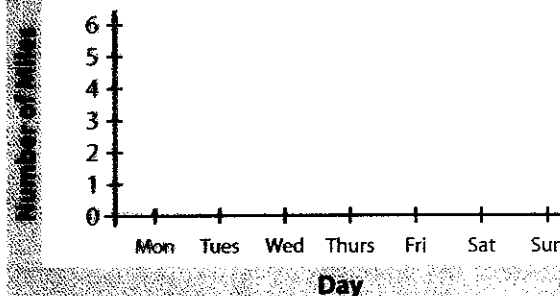
- 4 \_\_\_\_\_ inches; \_\_\_\_\_ inches

Chang's height increased \_\_\_\_\_ inches from 2 years to 4 years.

Use the table to complete the line graph.

| Sarah's Exercise |              |
|------------------|--------------|
| Day              | Miles Walked |
| Monday           | 3            |
| Tuesday          | 2            |
| Wednesday        | 3            |
| Thursday         | 1            |
| Friday           | 4            |
| Saturday         | 5            |
| Sunday           | 6            |

**Sarah's Exercise**



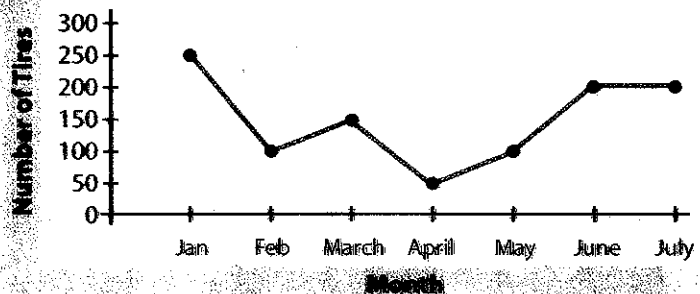
**BUILD  
THE  
CONCEPT**

## TRY IT TOGETHER

Solve each problem using the line graph.

- 5 a. Did tire sales increase or decrease from March to April? \_\_\_\_\_
- b. What is the difference in sales from March to April?  
 \_\_\_\_\_ - \_\_\_\_\_ = \_\_\_\_\_ tires

Vic's Tire Sales



- 6 In which month did Vic sell the same number of tires as he sold in February?  
 \_\_\_\_\_
- 7 Between which two months did Vic's sales stay the same?  
 \_\_\_\_\_

## WORK ON YOUR OWN

### Interpret a Line Graph

Use the line graph titled Vic's Tire Sales.

#### Using Symbols

- Title:** Vic's Tire Sales
- Labels:** Month, Tires Sold  
**Categories:** Jan, Feb, March, April, May, June, July  
**Scale:** 0 to 300

#### Using Words

Read the title.

Look at the labels, the categories, and the scale.

- Did the sales increase or decrease from April to May? increase

When the values increase, the line rises.  
 When the values decrease, the line falls.  
 When there is no change, the line is horizontal (flat).

HOW TO

# Problem-Solving: Using a Table

Name \_\_\_\_\_ Class \_\_\_\_\_ Date \_\_\_\_\_

## GET STARTED

- 1 a. \_\_\_\_\_ students chose baseball.  
 b. \_\_\_\_\_ + \_\_\_\_\_ = \_\_\_\_\_  
 \_\_\_\_\_ students voted for baseball or soccer.

| Students' Favorite Sport to Watch |                 |
|-----------------------------------|-----------------|
| Sport                             | Number of Votes |
| Baseball                          | 15              |
| Football                          | 7               |
| Soccer                            | 3               |

- 2 7, 6, 5, 6  
 a. Mean: \_\_\_\_\_ + \_\_\_\_\_ + \_\_\_\_\_ + \_\_\_\_\_ = \_\_\_\_\_  
 → \_\_\_\_\_ ÷ \_\_\_\_\_ = \_\_\_\_\_  
 b. Median: \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_  
 → \_\_\_\_\_ + \_\_\_\_\_ = \_\_\_\_\_ → \_\_\_\_\_ ÷ \_\_\_\_\_ = \_\_\_\_\_

- 3 How many more students chose eggs than bagels?  
 \_\_\_\_\_ - \_\_\_\_\_ = \_\_\_\_\_

| Favorite Breakfast |                 |
|--------------------|-----------------|
| Breakfast Food     | Number of Votes |
| Eggs               | 7               |
| Waffles            | 6               |
| Bagels             | 5               |
| Cereal             | 6               |

- 4 What is the mean number of votes?  
 \_\_\_\_\_ votes
- 5 What is the median number of votes?  
 \_\_\_\_\_ votes

## TRY IT TOGETHER

Solve each problem using the table.

- 6 Find the mean of the distances from Anton's house.

$$\begin{array}{r} \underline{\quad\quad} + \underline{\quad\quad} + \underline{\quad\quad} + \\ \underline{\quad\quad} + \underline{\quad\quad} = \underline{\quad\quad} \\ \underline{\quad\quad} \div \underline{\quad\quad} = \underline{\quad\quad} \text{ miles} \end{array}$$

- 7 Find the median. Which place is the median distance from Anton's house?

median =                     

| Distance from Anton's House |                      |
|-----------------------------|----------------------|
| Place                       | Number of Miles Away |
| Gas Station                 | 2                    |
| Bookstore                   | 7                    |
| Shoe Store                  | 12                   |
| Park                        | 3                    |
| School                      | 1                    |

## WORK ON YOUR OWN

### Solve a Problem Using a Table

How many more students voted for pepperoni than for sausage?

1. **Find:** how many more students voted for pepperoni than for sausage

2. **How?** Use a table.

3. **Solve.** Find the number of votes for each topping.

Pepperoni: 13 votes

Sausage: 8 votes

Subtract.  $13 - 8 = 5$

Five more students voted for pepperoni than for sausage.

4. **Is the answer reasonable? Explain.** Yes, by using the opposite operation of subtraction,  $5 + 8 = 13$ .

| Favorite Pizza Toppings |                 |
|-------------------------|-----------------|
| Topping                 | Number of Votes |
| Pepperoni               | 13              |
| Sausage                 | 8               |
| Mushrooms               | 5               |
| Onions                  | 2               |
| Extra Cheese            | 7               |



# New Vocabulary

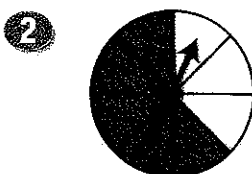
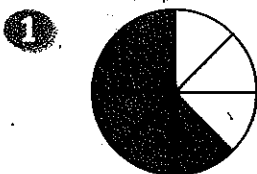
event  
favorable outcomes  
outcome  
possible outcomes  
probability

# Lesson 8

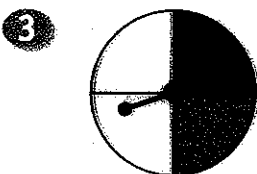
## Understanding Probability

Name \_\_\_\_\_ Class \_\_\_\_\_ Date \_\_\_\_\_

### GET STARTED



a. Green: — b. White: —



a. \_\_\_\_\_

b. Yellow: — c. Orange: —

d. Green: — e. \_\_\_\_\_



### BUILD THE CONCEPT

Yellow or blue:

The spinner will always land on yellow or blue. It is a **certain** event.

Blue:

This spinner will probably not land on blue. It is an **unlikely** event.

Yellow:

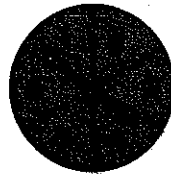
This spinner will probably land on yellow. It is a **likely** event.

Red:

The spinner will never land on red. It is an **impossible** event.

## TRY IT TOGETHER

Find each probability.



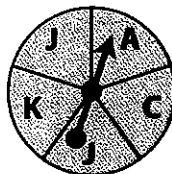
- |   |   |
|---|---|
| <p>4 When Bella flips the coin, what is the probability that it will land on heads? —</p> <p>6 What is the probability of the spinner landing on the number 5? —</p> <p>8 What is the probability of the spinner landing on a number less than 7? — =</p> | <p>5 When James flips the coin, what is the probability that it will land on tails? —</p> <p>7 What is the probability of the spinner landing on an even number? —</p> <p>9 What is the probability of the spinner landing on a number greater than 10? — =</p> |
|---|---|

## WORK ON YOUR OWN

### Find a Probability

#### Using Symbols

1. What is the probability that the spinner will land on the letter J?



Sections with J: 2

2. Total sections: 5

3.  $\frac{2}{5}$

#### Using Words

Find the number of favorable outcomes.

Find the total number of possible outcomes.

Write the probability as a fraction.

$$\frac{\text{number of favorable outcomes}}{\text{total number of outcomes}}$$

HOW TO

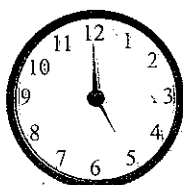


## Time

Name \_\_\_\_\_ Class \_\_\_\_\_ Date \_\_\_\_\_

### GET STARTED

1



a. \_\_\_\_\_ : \_\_\_\_\_

b. \_\_\_\_\_ o'clock

2

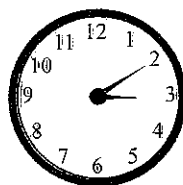
5, 10, \_\_\_\_\_, 20, \_\_\_\_\_, 30, 35, 40, \_\_\_\_\_, 50, \_\_\_\_\_

3

a. 15 \_\_\_\_\_

b. 45 \_\_\_\_\_

4



a. \_\_\_\_\_ : \_\_\_\_\_

b. \_\_\_\_\_

5



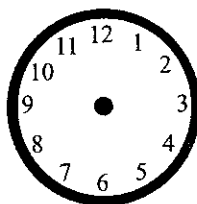
a. \_\_\_\_\_ : \_\_\_\_\_

b. \_\_\_\_\_

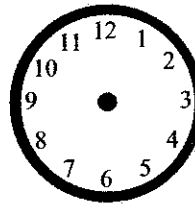
Elwood started guitar practice at 3:30. He finished guitar practice at 4:45. Write the hands on the clocks to show the times.

**BUILD THE CONCEPT**

Start Practice: 3:30



End practice: 4:45



## TRY IT TOGETHER

Write the time shown on each clock using numbers and words.

6



a. \_\_\_\_\_ : \_\_\_\_\_

b. \_\_\_\_\_

7



a. \_\_\_\_\_ : \_\_\_\_\_

b. \_\_\_\_\_

8



a. \_\_\_\_\_

b. \_\_\_\_\_

9



a. \_\_\_\_\_

b. \_\_\_\_\_

## WORK ON YOUR OWN

### Tell and Write Time

#### Using Symbols



Hour = 9

Minutes = 20



Hours

Minutes

9:20

nine twenty

#### Using Words

On an analog clock, the short hand tells the hour. When the short hand is between two numbers, the number before is the hour.

The long hand tells the minutes. Start at 12, or 0 minutes. Count by 5 to each number until the number the minute hand points to is reached.

On a digital clock, the hour is shown to the left of the colon. The minutes are shown to the right of the colon.

Write the hour, a colon, and the minutes to write the time using numbers.

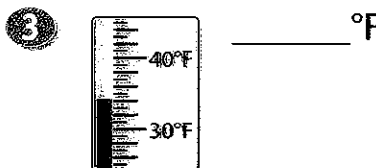
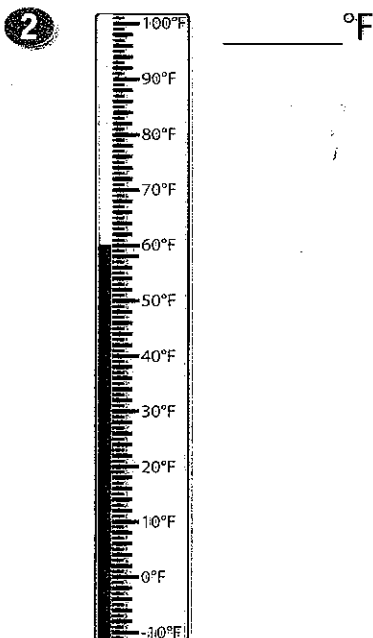
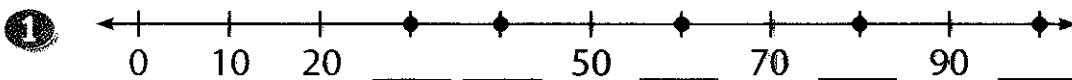
Write the hour then the minutes to write the time using words.

HOW TO

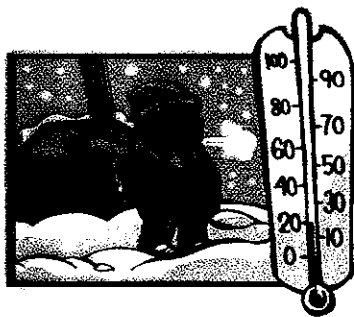
# Customary Temperature

Name \_\_\_\_\_ Class \_\_\_\_\_ Date \_\_\_\_\_

## GET STARTED

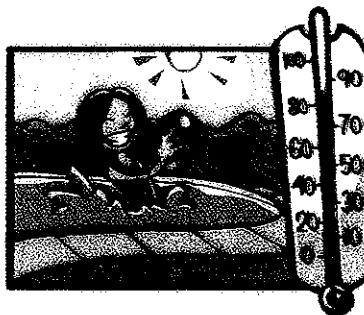


Temperature tells how hot or cold it is.



Is 20°F hot or cold?

\_\_\_\_\_



Is 85°F hot or cold?

\_\_\_\_\_

**BUILD  
 THE  
 CONCEPT**

## TRY IT TOGETHER

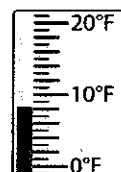
Write the temperature shown on each thermometer.

4



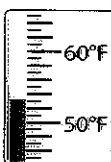
\_\_\_\_\_ °F

5



\_\_\_\_\_

6



\_\_\_\_\_

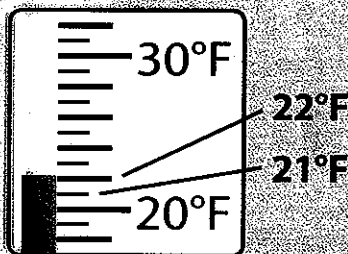
## WORK ON YOUR OWN

### Read a Thermometer

#### Using Symbols

1. Each mark shows 1°F.

2.



The temperature is 22°F.

#### Using Words

Look at the scale on the thermometer.

If the red line ends at a numbered mark on the scale, that number is the temperature.

If the red line does not end at a numbered mark, find the closest numbered mark below the end of the red line. Count from the numbered mark to the mark at the end of the red line.

HOW  
TO



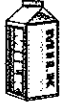


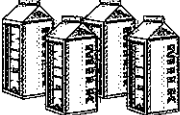
# Customary Capacity


Name \_\_\_\_\_ Class \_\_\_\_\_ Date \_\_\_\_\_

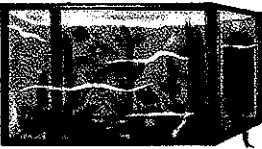
## GET STARTED

1  $4 \times 2 = \underline{\hspace{2cm}}$

2  $3 \times 4 = \underline{\hspace{2cm}}$

| Benchmarks for Measuring Customary Capacity   |   |   |
|---|---|---|
|  =  |  =  |  =  |
| 1 pint = 2 cups   | 1 quart = 2 pints   | 1 gallon = 4 quarts   |

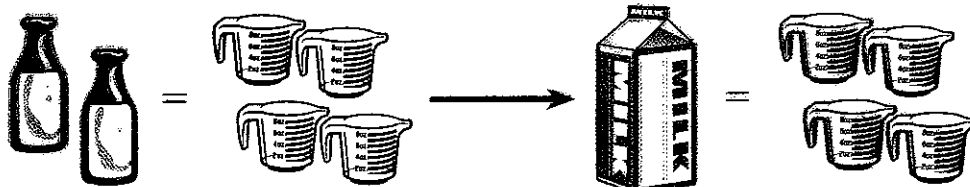
3 a.  cups pints  
 quarts gallons  
 juice glass

b.  cups pints  
 quarts gallons  
 fish tank

4 4 quarts =        pints  
 larger unit → smaller unit  
 1 quart =        pints  
 $4 \times \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$

5 3 gallons =        quarts  
 larger unit → smaller unit  
 1 gallon =        quarts  
 $3 \times \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$

How many cups are in 1 quart?



2 pints =        cups

1 quart =        cups

**BUILD  
 THE  
 CONCEPT**

## TRY IT TOGETHER

Circle the best unit to use to measure the capacity of each object.

⑥ bathtub  
cups pints quarts gallons

⑦ teapot  
cups pints quarts gallons

Change each measurement.

⑧ 6 pints = \_\_\_\_ cups  
\_\_\_\_ × \_\_\_\_ = \_\_\_\_

⑨ 3 quarts = \_\_\_\_ pints  
\_\_\_\_ × \_\_\_\_ = \_\_\_\_

## WORK ON YOUR OWN

HOW  
TO

### Find the Best Unit to Measure the Capacity of an Object

#### Using Symbols

- The bucket holds much more than 1 cup, 1 pint, or 1 quart.



#### Using Words

Compare the object to a benchmark.

- Use gallons to measure the capacity of the bucket.

Choose the unit related to the benchmark.

### Change from a Larger Unit to a Smaller Unit

#### Using Symbols

- 3 pints = ? cups  
1 pint = 2 cups

2.  $3 \times 2 = 6$

- 3 pints = 6 cups

#### Using Words

Find the number of smaller units in 1 larger unit.

Multiply the number of larger units by the number found in Step 1.

Complete the statement.

# Customary Weight

Name \_\_\_\_\_ Class \_\_\_\_\_ Date \_\_\_\_\_

## GET STARTED

1  $16 + 16$

+

2  $19 + 12 + 13$

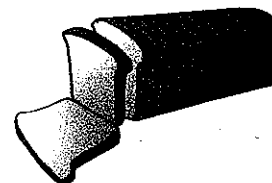
+

- 3 a. quarter  
ounces pounds  
b. medium-sized dog  
ounces pounds

### Benchmarks for Measuring Customary Weight



A slice of bread  
weighs about  
1 ounce.

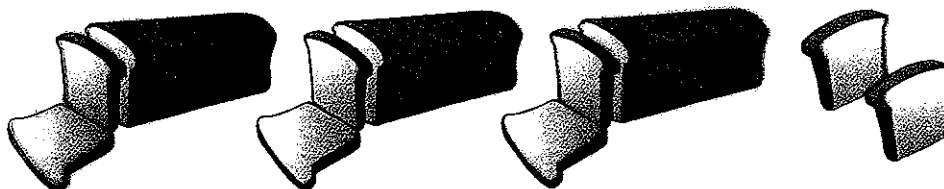


A loaf of bread weighs  
about 1 pound.  
1 pound = 16 ounces

4 2 pounds = \_\_\_\_\_ ounces  
larger unit → smaller unit  
1 pound = \_\_\_\_\_ ounces  
\_\_\_\_\_ + \_\_\_\_\_ = \_\_\_\_\_

5 2 pounds 4 ounces = \_\_\_\_\_ ounces  
1 pound = \_\_\_\_\_ ounces  
\_\_\_\_\_ + \_\_\_\_\_ = \_\_\_\_\_  
\_\_\_\_\_ + \_\_\_\_\_ = \_\_\_\_\_

How many ounces are in 3 pounds 2 ounces?



3 pounds = \_\_\_\_\_ ounces + \_\_\_\_\_ ounces + \_\_\_\_\_ ounces  
= \_\_\_\_\_ ounces

3 pounds 2 ounces = \_\_\_\_\_ ounces + \_\_\_\_\_ ounces = \_\_\_\_\_ ounces

**BUILD  
THE  
CONCEPT**

## TRY IT TOGETHER

Circle the better unit to use to measure the weight of each object.

- 6 brick  
ounces    pounds

- 7 cookie  
ounces    pounds

Change each measurement.

- 8 1 pound 15 ounces = \_\_\_\_ ounces  
\_\_\_\_ + \_\_\_\_ = \_\_\_\_

- 9 2 pounds 10 ounces = \_\_\_\_ ounces  
\_\_\_\_ + \_\_\_\_ = \_\_\_\_  
\_\_\_\_ + \_\_\_\_ = \_\_\_\_

## WORK ON YOUR OWN

Find the Best Unit to Measure the Weight of an Object

### Using Symbols

1. The apples weigh much more than 1 slice of bread.



### Using Words

Compare the object to a benchmark.

2. Use pounds to measure the weight of the apples.

Choose the unit related to the benchmark.

Change from Pounds or Pounds and Ounces to Ounces

### Using Symbols

1. 2 pounds 5 ounces = ? ounces  
1 pound = 16 ounces

2.  $16 + 16 = 32$

3.  $32 + 5 = 37$   
2 pounds 5 ounces = 37 ounces

### Using Words

There are 16 ounces in 1 pound.

Add 16 the number of times indicated by the number of pounds.

If there are ounces, add the original number of ounces to the sum in Step 2.





# Customary Length

Name \_\_\_\_\_ Class \_\_\_\_\_ Date \_\_\_\_\_

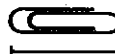
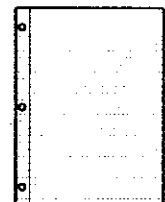

## GET STARTED

1  $2 \times 3 =$  \_\_\_\_\_

2 
$$\begin{array}{r} 12 \\ \times 3 \\ \hline \end{array}$$

- 3 a. length of a hairbrush  
\_\_\_\_\_
- b. width of a window  
\_\_\_\_\_
- c. length of a football field  
\_\_\_\_\_

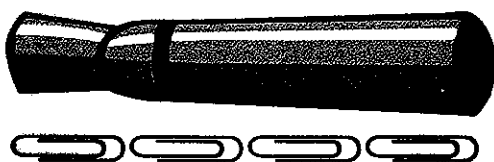
### Benchmarks for Measuring Customary Length

|   |  |   |
|---|--|---|
|  |  |  |
| about 1 inch  | about 1 foot   | about 1 yard  |

4 3 feet = \_\_\_\_\_ inches  
larger unit  $\rightarrow$  smaller unit  
1 foot = \_\_\_\_\_ inches  
 $3 \times$  \_\_\_\_\_ = \_\_\_\_\_

5 2 yards = \_\_\_\_\_ feet  
larger unit  $\rightarrow$  smaller unit  
1 yard = \_\_\_\_\_ feet  
 $2 \times$  \_\_\_\_\_ = \_\_\_\_\_

How many inches long is the marker?



The marker is about \_\_\_\_\_ inches long.

How many paper clips  
long is the marker?  
\_\_\_\_\_ paper clips

**BUILD  
THE  
CONCEPT**

## TRY IT TOGETHER

Circle the best unit to use to measure each object.

- 6 length of a stadium      7 width of a picture      8 height of a bicycle  
 inches   feet   yards      inches   feet   yards      inches   feet   yards

Change each measurement.

9 4 feet = \_\_\_\_\_ inches  
 \_\_\_\_\_ × \_\_\_\_\_ = \_\_\_\_\_

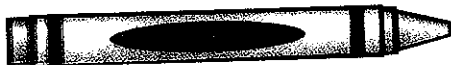
10 5 yards = \_\_\_\_\_ feet  
 \_\_\_\_\_ × \_\_\_\_\_ = \_\_\_\_\_

## WORK ON YOUR OWN

### HOW TO

Find the Best Unit to Measure the Length of an Object

Using Symbols

1. 

Small like 1 paper clip.

Using Words

Compare the object to a benchmark.

2. Measure the crayon in inches.

Choose the unit.

Change from Feet to Inches

1. 3 feet = ? inches  
 1 foot = 12 inches

There are 12 inches in 1 foot.

2.  $3 \times 12 = 36$   
 3 feet = 36 inches

Multiply the number of feet by 12 to find the number of inches.

Change from Yards to Feet

1. 4 yards = ? feet  
 1 yard = 3 feet

There are 3 feet in 1 yard.

2.  $4 \times 3 = 12$   
 4 yards = 12 feet

Multiply the number of yards by 3 to find the number of feet.

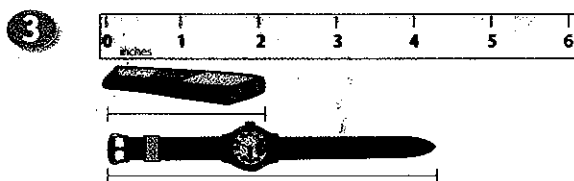
# Measuring and Estimating Length Using Customary Units

Name \_\_\_\_\_ Class \_\_\_\_\_ Date \_\_\_\_\_

## GET STARTED

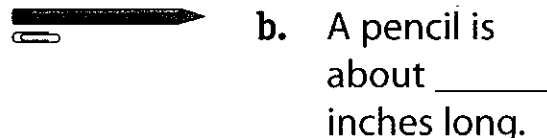
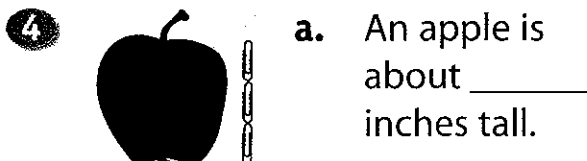
1 2 feet = \_\_\_\_\_ inches  
\_\_\_\_\_ × \_\_\_\_\_ = \_\_\_\_\_

2 length of a banana  
inches feet yards

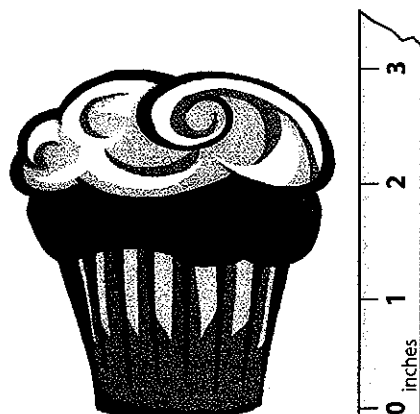


a. eraser: \_\_\_\_\_ inches

b. watch: \_\_\_\_\_ inches



Karen made cupcakes for the class. How thick is the icing?



Height of cupcake with icing:  
\_\_\_\_\_ inches

Height of cupcake without icing:  
\_\_\_\_\_ inches

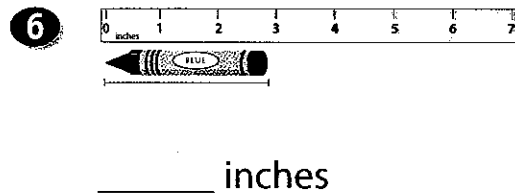
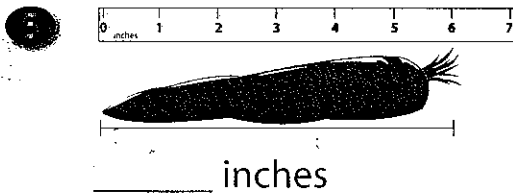
Thickness of icing:  
\_\_\_\_\_ - \_\_\_\_\_ = \_\_\_\_\_

The icing is \_\_\_\_\_ inch thick.

**BUILT  
THE  
CONCEPT**

## TRY IT TOGETHER

Measure the length of each object to the nearest inch.



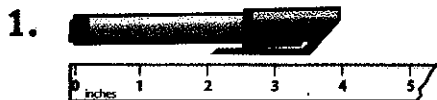
Estimate the length or height of each object to the nearest inch.



## WORK ON YOUR OWN

### Measure to the Nearest Inch

#### Using Symbols



2. The marker is 4 inches long.

#### Using Words

Line up one end of the object with the zero mark on the ruler.

Read the number on the ruler that is closest to the other end of the object.

### Estimate to the Nearest Inch

#### Using Symbols



2. The marker is about 4 inches long.

#### Using Words

Compare a paper clip or another benchmark to the object to be measured.

Estimate how many benchmark objects placed end-to-end would equal the length of the object.

HOW TO

# Metric Length

Name \_\_\_\_\_ Class \_\_\_\_\_ Date \_\_\_\_\_

## GET STARTED

1  $3 \times 10 =$  \_\_\_\_\_



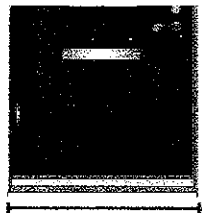
2 
$$\begin{array}{r} 10 \\ \times 5 \\ \hline \end{array}$$

3 a. length of a lollipop  
\_\_\_\_\_

b. height of a microwave oven  
\_\_\_\_\_

c. length of a swimming pool  
\_\_\_\_\_

### Benchmarks for Measuring Metric Length

|   |  |   |
|---|--|---|
|  |  |  |
| about 1<br>centimeter   | about 1<br>decimeter   | about 1 meter   |

4 4 decimeters = \_\_\_\_\_ centimeters  
larger unit  $\rightarrow$  smaller unit  
1 decimeter = \_\_\_\_\_ centimeters  
 $4 \times$  \_\_\_\_\_ = \_\_\_\_\_

5 5 meters = \_\_\_\_\_ decimeters  
larger unit  $\rightarrow$  smaller unit  
1 meter = \_\_\_\_\_ decimeters  
 $5 \times$  \_\_\_\_\_ = \_\_\_\_\_

Complete each statement.

\_\_\_\_\_ centimeters = 1 decimeter

1 decimeter = \_\_\_\_\_ centimeters

\_\_\_\_\_ decimeters = 1 meter

1 meter = \_\_\_\_\_ decimeters

**BUILD  
THE  
CONCEPT**

## TRY IT TOGETHER

Circle the best unit to use to measure each object.

6 length of a soccer field  
centimeters decimeters meters

7 width of a credit card  
centimeters decimeters meters

Change each measurement.

8 3 decimeters = \_\_\_\_ centimeters  
\_\_\_\_  $\times$  \_\_\_\_ = \_\_\_\_

9 8 meters = \_\_\_\_ decimeters  
\_\_\_\_  $\times$  \_\_\_\_ = \_\_\_\_

## WORK ON YOUR OWN

Find the Best Unit to Measure the Length of an Object

Using Symbols

1.



Long, 1 doorway's width.

Using Words

Compare the object to a benchmark.

2. Measure the ladder in **meters**.

Choose the unit.

Change from Decimeters to Centimeters

1. 3 decimeters = ? centimeters  
1 decimeter = 10 centimeters

There are 10 centimeters in  
1 decimeter.

2.  $3 \times 10 = 30$   
3 decimeters = **30 centimeters**

Multiply the number of decimeters by  
10 to find the number of centimeters.

Change from Meters to Decimeters

1. 4 meters = ? decimeters  
1 meter = 10 decimeters

There are 10 decimeters in 1 meter.

2.  $4 \times 10 = 40$   
4 meters = **40 decimeters**

Multiply the number of meters by  
10 to find the number of decimeters.

HOW  
TO

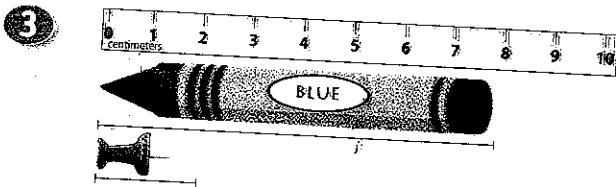
# Measuring and Estimating Length Using Metric Units

Name \_\_\_\_\_ Class \_\_\_\_\_ Date \_\_\_\_\_

## GET STARTED

1 3 decimeters = \_\_\_\_\_ centimeters  
 \_\_\_\_\_ × \_\_\_\_\_ = \_\_\_\_\_

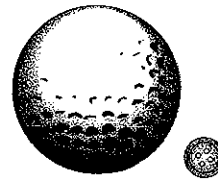
2 length of a crayon  
 centimeters decimeters meters



a. crayon: \_\_\_\_\_ centimeters  
 b. thumbtack: \_\_\_\_\_ centimeters

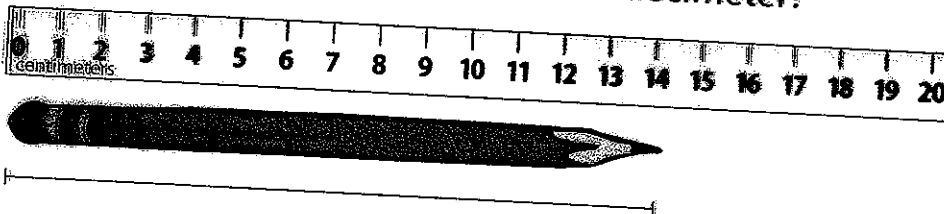


a. A cap eraser is about \_\_\_\_\_ centimeters tall.



b. A golf ball is about \_\_\_\_\_ centimeters tall.

Is the pencil longer or shorter than 1 decimeter?



**BUILD THE CONCEPT**

The pencil is about \_\_\_\_\_ centimeters long.

1 decimeter = \_\_\_\_\_ centimeters

The pencil is \_\_\_\_\_ than 1 decimeter.