

# Measuring Length

## How Far Is It?

### You need

- measuring tools such as yardstick, ruler, string, paper clips, and tape measure

Try different ways to measure distance.

### STEP 1 Estimating Distance

Stand on one side of your classroom. Look across the room. Estimate the distance to the other side of the room.

It looks about \_\_\_\_\_ long.

### STEP 2 Measuring Distance

Talk with your group about how you could measure the length of the room. Then try it. What did you find?

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It measures about \_\_\_\_\_ long.

### STEP 3 Comparing Lengths

Compare lengths with other groups. How were the results alike? How were they different?

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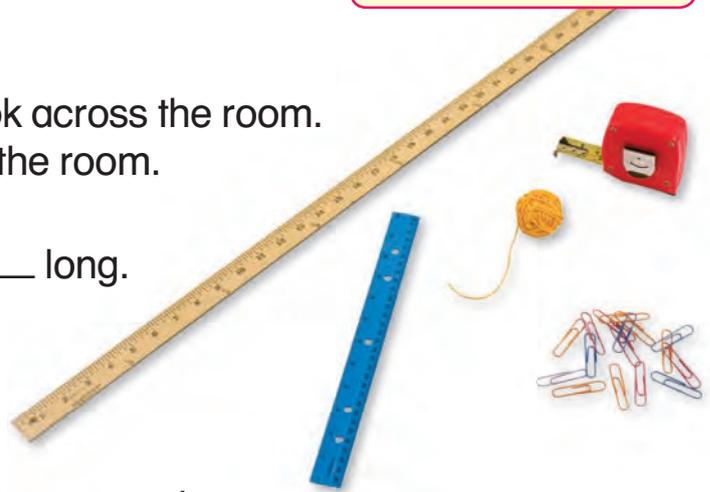
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Investigation





# School-Home Connection

## Dear Family,

Today we started Chapter 12 of *Think Math!* In this chapter, I will learn different ways and different units to measure length. There are NOTES on the Lesson Activity Book pages to explain what I am learning every day.

Here are some activities for us to do together at home. These activities will help me as I learn to measure length.

Love,

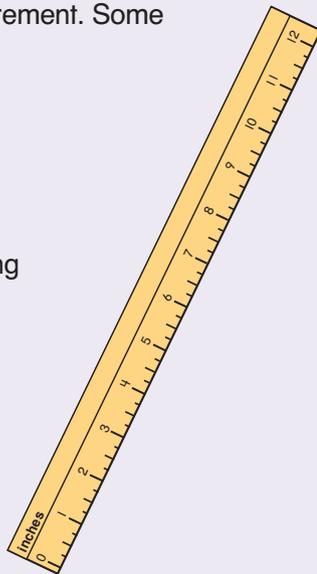
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## Family Fun

### What's My Length?

Work with your child to play this game. Your child will play this game in Lesson 4.

- Think of a simple measurement in inches, feet, or yards. For example, you might use 1 foot, 6 inches, or 5 yards. Do not share the measurement with your child. Keep it a secret.
- Have your child ask *yes/no* questions to try and guess your secret measurement. Some possible questions might be:
  - Is it longer than 1 foot?
  - Is it as long as this room?
  - Is it shorter than my hand?
- Have your child continue asking questions until he or she has correctly identified the measurement.
- Switch roles and play again.



### Reading Road Signs

Together, find road signs listing different distances.

- When traveling around town or on a highway, play an informal game to find road signs that give different distances.
- Call them out as you see them. After reading each one, tell whether it is a short distance or a long distance.



14 FT 4 IN.

- After returning home, you might want to draw some of the signs you saw on your trip.

# Measuring Length with Nonstandard Units

NCTM Standards 1, 4, 6, 9, 10

My group is measuring with \_\_\_\_\_ as the unit.

**Draw a line for each length.**

1. 1 unit long



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2. 2 units long



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3. 3 units long



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4. 4 units long



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5. Make your own line. Measure it and write the length.



about \_\_\_\_\_ units long



**NOTE:** Your child is learning about nonstandard units. Have your child measure objects around your home using pennies as a unit of measure.



How long is each bar? Use your unit to measure.



The bar is about \_\_\_\_\_ units long.

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The bar is about \_\_\_\_\_ units long.

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The bar is about \_\_\_\_\_ units long.

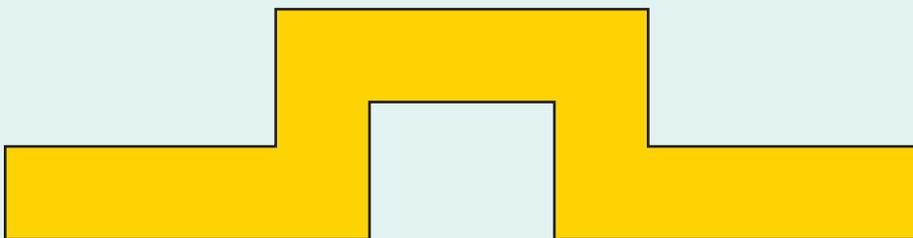
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9. Draw a bar. Find its length with your unit.

The bar is about \_\_\_\_\_ units long.

### Challenge

10. How long is the path? Use your unit.

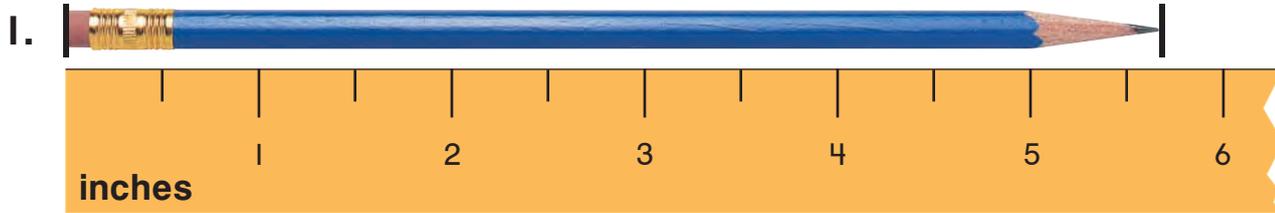


The path is about \_\_\_\_\_ units long.

# Measuring to the Nearest Inch

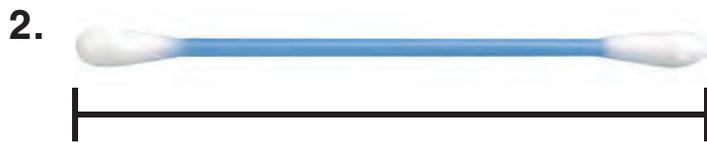
NCTM Standards 1, 4, 6, 8, 9, 10

How long is the picture of each object? Use a ruler to measure to the nearest inch.



about 6 inches

Line up the end of the ruler with the end of the object.



about \_\_\_\_\_ inches



about \_\_\_\_\_ inches



about \_\_\_\_\_ inches

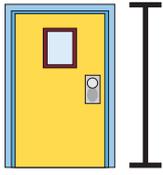
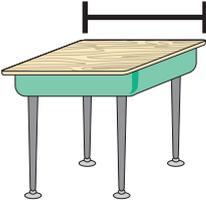
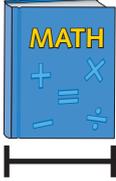


about \_\_\_\_\_ inch



**NOTE:** Your child is learning to measure length to the nearest inch.

How long is each real object? Estimate.  
Then measure to the nearest inch.

	Object	Estimate	Measurement
6.	 <b>classroom door</b>	about _____ inches	about _____ inches
7.	 <b>desk</b>	about _____ inches	about _____ inches
8.	 <b>math book</b>	about _____ inches	about _____ inches

Draw a picture of something in your classroom that matches each length.

9. about 2 inches

10. about 5 inches

11. about 10 inches

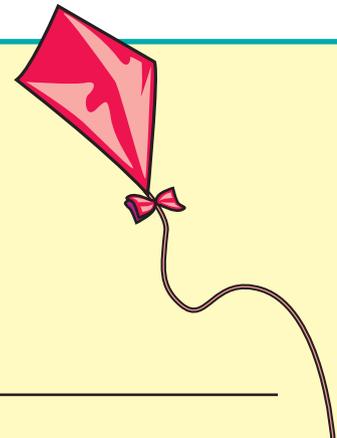
## Problem Solving

12. Todd is buying a new kite. He wants one that is more than 10 inches wide. He goes to the store without a ruler. How might he measure the kite?

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# Measuring in Inches, Feet, and Yards

NCTM Standards 1, 4, 6, 8, 9, 10

Which unit would you use to measure each real object?  
Circle *inches*, *feet*, or *yards*.



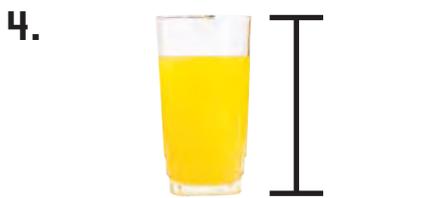
inches  
feet  
yards



inches  
feet  
yards



inches  
feet  
yards



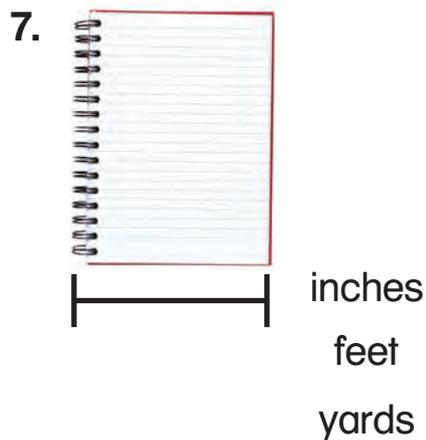
inches  
feet  
yards



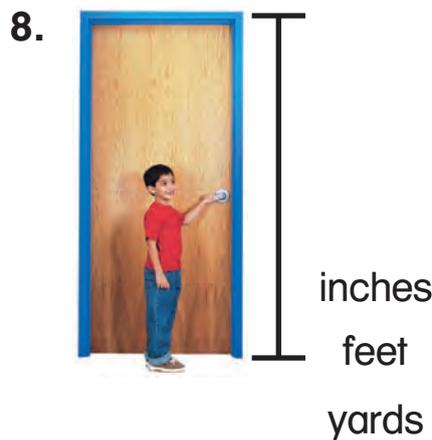
inches  
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yards



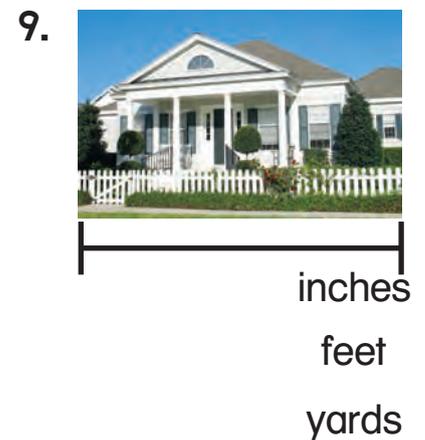
inches  
feet  
yards



inches  
feet  
yards



inches  
feet  
yards



inches  
feet  
yards

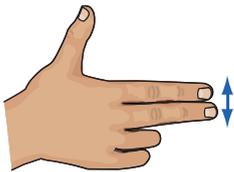
 **NOTE:** Your child is learning about inches, feet, and yards. Ask your child to name an object or distance that would be best to measure in yards.

Draw a classroom object or distance you would measure with each unit. Find the length.

	Unit	Object	Length to the Nearest Unit
10.	inches		_____ inches
11.	feet		_____ feet
12.	yards		_____ yards

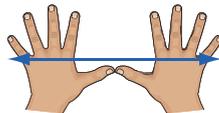
Write *inch*, *foot*, or *yard* for each benchmark object.

13.



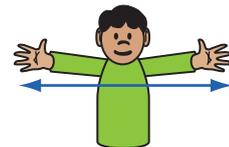
about 1 \_\_\_\_\_

14.



about 1 \_\_\_\_\_

15.



a little more than 1

\_\_\_\_\_

## Problem Solving

16. Jan says that she measured her book with string. How could string help her find the width?




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# Relating Inches, Feet, and Yards

NCTM Standards 1, 2, 4, 6, 8, 9, 10

Which is the best unit to measure the real object?

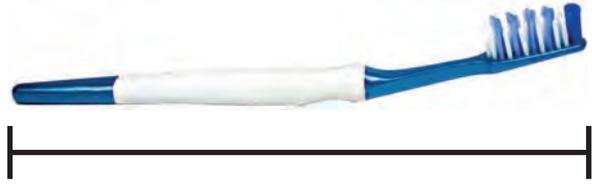
Write *inches*, *feet*, or *yards*.

1.



about 4 \_\_\_\_\_ long

2.



about 6 \_\_\_\_\_ long

3.



about 5 \_\_\_\_\_ long

4.



about 5 \_\_\_\_\_ long

5.



about 6 \_\_\_\_\_ tall



**NOTE:** Your child is learning how inches, feet, and yards are related. Ask your child to tell how many inches are in 1 foot and how many feet are in 1 yard.

Complete each table.

6.

<b>Number of Yards</b>	1	2	3		5	6	
<b>Number of Feet</b>	3			12			21

7.

<b>Number of Feet</b>	1	2	3	4	5		7
<b>Number of Inches</b>	12	24				72	

Use the tables to complete the problems.  
Then write your own problems.

8. The chalkboard is 2 yards long.  
How many feet is that?

\_\_\_\_\_ feet

9. The baseball bat is 3 feet long.  
How many inches is that?

\_\_\_\_\_ inches

 10. Write a problem about yards and feet.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

 11. Write a problem about feet and inches.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

## Challenge

12. Each time George Grasshopper jumps, he moves twice as far as his last jump. His first jump is 3 inches.  
On which jump will he move 4 feet? jump \_\_\_\_\_

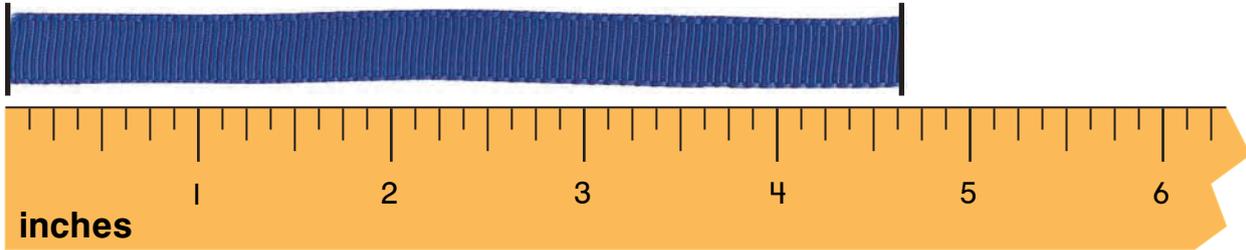
<b>Jump Number</b>	1	2	3	4	5	6
<b>Distance in Inches</b>	3	6	12			

# Using Fractions to Measure Length

NCTM Standards 1, 2, 4, 6, 7, 8, 9, 10

How long is each piece of ribbon? Use a ruler to measure to the nearest half inch.

1.



about  $4\frac{1}{2}$  inches

2.



about \_\_\_\_\_ inches

3.



about \_\_\_\_\_ inches

4.



about \_\_\_\_\_ inches

5. Draw a line that is about  $3\frac{1}{2}$  inches long.  
Start at the dot.



**NOTE:** Your child is learning about half inches and fractions of a foot and of a yard.

Complete each table. What is missing?

6.	<b>Number of Yards</b>	$\frac{1}{3}$	$\frac{2}{3}$	1		3	4	
	<b>Number of Feet</b>	1	2		6			15

7.	<b>Number of Feet</b>	$\frac{1}{12}$	$\frac{2}{12}$	$\frac{5}{12}$	$\frac{7}{12}$	$\frac{11}{12}$		2
	<b>Number of Inches</b>	1	2				12	

Use the tables to complete the problems.

8. Tina cuts a 6-inch piece of ribbon. What fraction of a foot is the piece of ribbon?

\_\_\_\_\_ of a foot

9. Bob jumps 24 inches. Kyle jumps 1 yard. Who jumped further?

\_\_\_\_\_

 10. Jill has 7 feet of ribbon. Amy has 2 yards of ribbon. Who has more ribbon? Use words, numbers, or pictures to explain.

## Problem Solving

11. Can a piece of ribbon be 4 inches long when measured to the nearest inch and to the nearest half inch? Explain.

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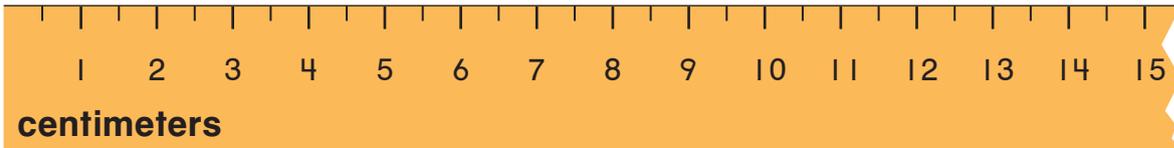
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# Measuring to the Nearest Centimeter

NCTM Standards 3, 4, 6, 9, 10

How long is the picture of each object? Use a ruler to measure to the nearest centimeter.

1.



about 14 centimeters

2.



about \_\_\_\_\_ centimeters

3.



about \_\_\_\_\_ centimeters

4.



about \_\_\_\_\_ centimeters

5.



about \_\_\_\_\_ centimeter

6.



about \_\_\_\_\_ centimeters



**NOTE:** Your child is learning to measure length to the nearest centimeter.

Draw a line for each length. Start at the dot.

7.



13 centimeters

8.



2 centimeters

9.



8 centimeters

Draw a picture of something in your classroom that matches each length.

10. about 5 centimeters

11. about 30 centimeters

12. about 45 centimeters

## Challenge

Follow the clues to draw a figure.

13. The distance around a figure is 12 centimeters. The figure has 4 sides. The sides are NOT all the same length.

# Measuring in Centimeters and Meters

NCTM Standards 1, 4, 6, 7, 8, 9, 10

Which unit would you use to measure each real object?  
Circle *centimeters* or *meters*.

1.



centimeters

meters

2.



centimeters

meters

3.



centimeters

meters

4.



centimeters

meters

5.



centimeters

meters

6.



centimeters

meters

7.



centimeters

meters

8.



centimeters

meters

9.



centimeters

meters



**NOTE:** Your child is learning about centimeters and meters.

Choose a unit to measure each real object.  
Then measure to the nearest unit.

**Units of Measure**

inches    feet    yards  
centimeters    meters

	Object	Estimate	Measurement
10.	 <b>chalk</b>	_____	about  _____
11.	 <b>chalkboard</b>	_____	about  _____
12.	 <b>book</b>	_____	about  _____

 **13.** For Problem 12, how did you choose the unit? How did you measure the book? \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

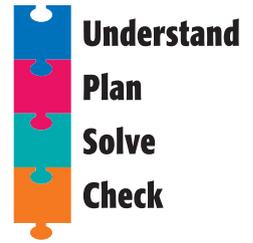
## Problem Solving

**14.** Kate and Carla each have a piece of string. Kate's string is 7 centimeters long. Carla's string is 7 inches long. Who has the longer string? \_\_\_\_\_  
 Use words, numbers, or pictures to explain.

# Problem Solving Strategy

## Act It Out

NCTM Standards 1, 2, 4, 6, 7, 8, 9, 10



1. A pencil case is 15 centimeters long.

Can your pencil fit in this case? \_\_\_\_\_

How long is your pencil? about \_\_\_\_\_

2. Pat's pencil is longer than this line.



How long might Pat's pencil be? about \_\_\_\_\_

3. Tyler buys a book for 86¢. He pays the exact amount with the fewest coins. What coins does Tyler use?

\_\_\_\_\_

4. Alice has 12 shells, Sandy has 9 shells and Wyatt has 15 shells. They want to share the shells equally. How many shells will each person get?

\_\_\_\_\_ shells



**NOTE:** Your child is exploring different ways to solve problems. Sometimes acting it out is an efficient way to solve a problem.

# Problem Solving Test Prep

1. When you double this odd number, you get a number between 50 and 55. What is the number?

- (A) 27
- (B) 29
- (C) 31
- (D) 53

2. There are 8 pages in a photo album. Each page has 6 photos on it. How many photos are in the whole album?

- (A) 14 photos
- (B) 24 photos
- (C) 36 photos
- (D) 48 photos

## Show What You Know

3. Jan has already delivered 135 newspapers. He has 57 more newspapers to deliver. How many newspapers will Jan deliver in all?

\_\_\_\_\_ newspapers

Explain how you found the answer.

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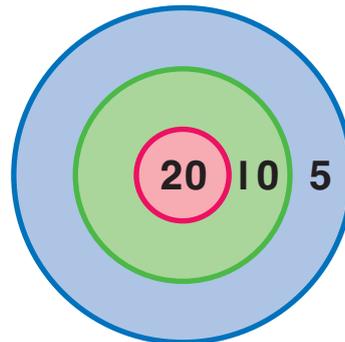
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4. Two counters are tossed on this gameboard. Add the two scores. What total scores are possible?



\_\_\_\_\_

Explain how you found the answer.

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**Chapter 12**

**Review/Assessment**

NCTM Standards 1, 2, 3, 4, 6, 7, 8, 9, 10

1. Use a paper clip as the measuring unit.  
Draw a line 3 units long. [Lesson 1](#)

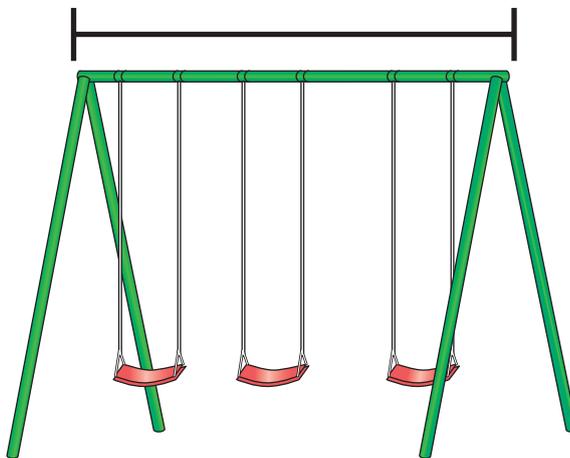
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2. How long is the picture of the crayon?  
Use a ruler to measure to the nearest inch. [Lesson 2](#)



about \_\_\_\_\_ inches

3. Which unit would you use to measure a real swing set?  
Circle *inches*, *feet*, or *yards*. [Lesson 3](#)



inches

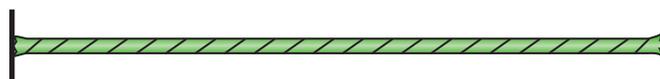
feet

yards

4. Complete the table. [Lesson 4](#)

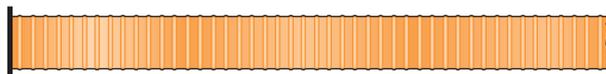
<b>Number of Yards</b>	1	2	3	4		6	7
<b>Number of Feet</b>		6			15	18	

5. How long is the piece of string? Use a ruler to measure to the nearest half inch. [Lesson 5](#)



about \_\_\_\_\_ inches

- 
6. How long is the picture of the ribbon? Use a ruler to measure to the nearest centimeter. [Lesson 6](#)



about \_\_\_\_\_ centimeters

- 
7. Which unit would you use to measure the nail? Circle *centimeters* or *meters*. [Lesson 7](#)



centimeters

meters

### Problem Solving [Lesson 8](#)

8. Reese has a piece of ribbon that is 2 feet long. She wants to cut it into 3 equal pieces. How many inches long is each piece?

\_\_\_\_\_ inches