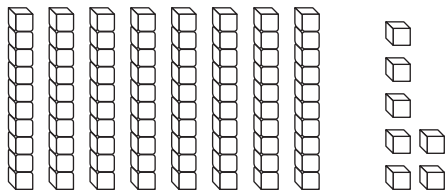# Algebra • Ways to Expand Numbers

Essential Question How can you write a two-digit number in different ways?

Model and Draw

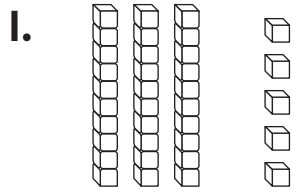There are different ways to think about a number.

> 8 tens and 7 ones is the same as 80 plus 7.

8 tens **7** ones

80 + **7**

87

Share and Show

MATH BOARD

Write how many tens and ones.
Write the number in two different ways.

1.

____ tens ____ ones

____ + ____

____

2.

____ tens ____ ones

____ + ____

____

Math Talk Does the 7 in this number show 7 or 70? Explain.

72

Getting Ready for Grade 2

one **GRI**

Write how many tens and ones.
Write the number in two different ways.

3.

_____ tens _____ ones

_____ + _____

_____

4.

_____ tens _____ ones

_____ + _____

_____

Problem Solving Real World
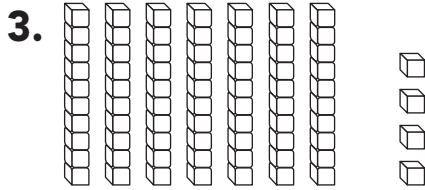
5. Draw the same number using only tens.
Write how many tens and ones.
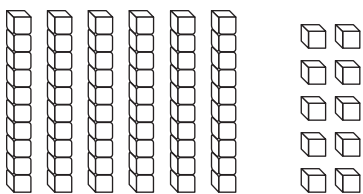Write the number in two different ways.

_____ tens _____ ones

_____ + _____

_____

_____ tens _____ ones

_____ + _____

_____

TAKE HOME ACTIVITY • Write a two-digit number to 99.
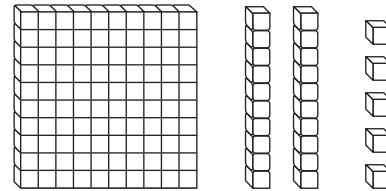Ask your child to write how many tens and ones and then write the
number a different way.

**GR2** two

Name _____

Identify Place Value

Essential Question How can you use place value to understand the value of a number?

Model and Draw

The **1** in **1**25 means 1 hundred.
The **2** in 1**2**5 means 2 tens.
The **5** in 12**5** means 5 ones.

125
Draw ☐ for ▦
Draw | for |
Draw ₀ for ₀
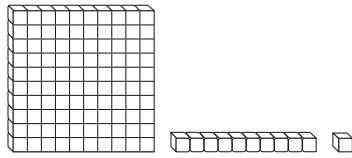
hundreds	tens	ones
1	2	5

Share and Show

MATH BOARD

Use your MathBoard and [blocks] to show the number.
Draw to complete the quick picture. Write how many hundreds, tens, and ones.

THINK
106 has no tens.

1.

106
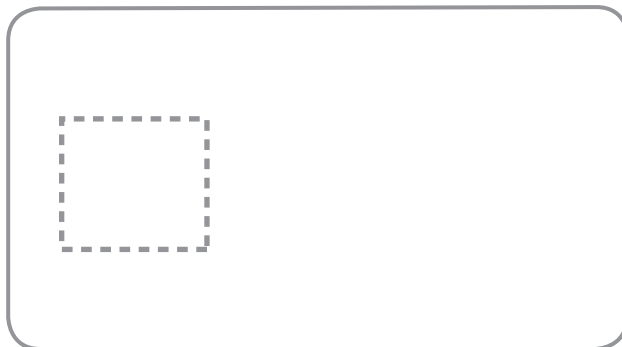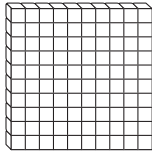
hundreds	tens	ones

Math Talk How is the 1 in 187 different from the 1 in 781?

Getting Ready for Grade 2
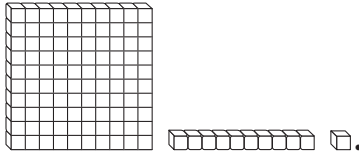
Use your MathBoard and ▦ ▭ ▯.
Draw to complete the quick picture.
Write how many hundreds, tens, and ones.

2.
170

hundreds	tens	ones
____	____	____

3.
143

hundreds	tens	ones
____	____	____

4.
121

hundreds	tens	ones
____	____	____

Problem Solving Real World

Circle your answer.

5. I have 1 hundred, 9 tens, and 9 ones. What number am I?

99   100   199

6. I have 3 ones, 0 tens, and 1 hundred. What number am I?

107   170   103

TAKE HOME ACTIVITY • Write some numbers from 100 to 199. Have your child tell how many hundreds, tens, and ones are in the number.

Name _____

Use Place Value to Compare Numbers

**Essential Question** How can you use place value to compare two numbers?

Model and Draw

I want to eat the greater number.

Use these symbols to compare numbers.

45 **46**

$> $ is greater than
$< $ is less than
$= $ is equal to

$45 < 46$
45 is less than 46.

Compare 134 and 125.
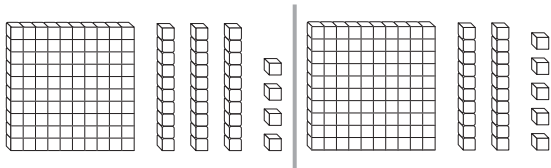
First compare hundreds.
One hundred is equal to one hundred.
$100 = 100$
If the hundreds are equal, compare the tens. 30 is greater than 20.
$134 > 125$

Share and Show

MATH BOARD

Write the numbers and compare. Write $>$, $<$, or $=$.

1.
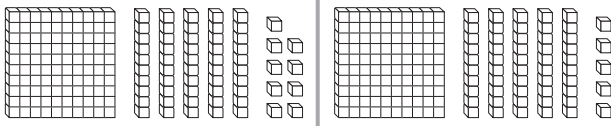
159 $\bigcirc{>}$ 155

2.

___ $\bigcirc$ ___
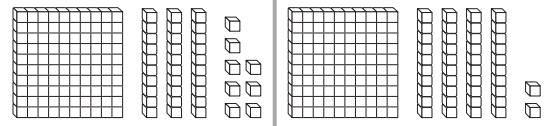
Compare the numbers using $>$, $<$, or $=$.

3. 187 $\bigcirc$ 168

4. 165 $\bigcirc$ 159

5. 127 $\bigcirc$ 141

Math Talk Compare 173 and 177. Did you have to compare all the digits? Why or why not?

Getting Ready for Grade 2

Write the numbers. Compare. Write >, <, or =.

6.

___ ◯ ___

7.

___ ◯ ___

Compare the numbers using >, <, or =.

8. 143 ◯ 143

9. 162 ◯ 157

10. 185 ◯ 188

11. 124 ◯ 129

12. 189 ◯ 195

13. 135 ◯ 135

14. 173 ◯ 164

15. 123 ◯ 117

16. 118 ◯ 131

17. 155 ◯ 145

18. 181 ◯ 181

19. 192 ◯ 179

20. 122 ◯ 129

21. 166 ◯ 177

22. 154 ◯ 154

Problem Solving Real World

23. Antonio is thinking of a number between 100 and 199. It has 1 hundred, 3 tens, and 6 ones. Kim is thinking of a number between 100 and 199. It has 1 hundred, 6 tens, and 3 ones. Who is thinking of a greater number?

_____ is thinking of a greater number.

Draw or write to explain.

TAKE HOME ACTIVITY • Choose two numbers between 100 and 199 and have your child explain which number is greater.

GR6 six

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Name _____

Algebra • Addition Function Tables

Essential Question How can you follow a rule to complete an addition function table?

Model and Draw

The rule is Add 9. Add 9 to each number.

Add 9	
7	16
8	17
9	18

Share and Show

MATH BOARD

Follow a rule to complete the table.

1.

Add 3	
7	
8	
9	

2.

Add 4	
6	
7	
8	

3.

Add 5	
5	
7	
9	

4.

Add 8	
5	
7	
9	

5.

Add 7	
6	
8	
9	

6.

Add 6	
6	
8	
9	

Math Talk Look at Exercise 4. How does the rule help you see a pattern?

Getting Ready for Grade 2

Follow a rule to complete the table.

7.

Add 7	
7	
8	
9	

8.

Add 4	
7	
8	
9	

9.

Add 5	
7	
8	
9	

10.

Add 8	
4	
6	
8	
9	

11.

Add 3	
3	
5	
7	
9	

12.

Add 6	
6	
7	
8	
9	

Problem Solving (Real World)

13. Solve. Complete the table.

Tom is 8 years old.
Julie is 7 years old.
Carla is 4 years old.

How old will each child
be in 4 years?

Tom	8	
Julie	7	
Carla	4	

TAKE HOME ACTIVITY • Copy Exercise 12 and change the numbers in the left column to 9, 7, 5, and 3. Have your child complete the table and explain how he or she used a rule to solve the problem.

Algebra • Subtraction Function Tables

Essential Question How can you follow a rule to complete a subtraction function table?

Model and Draw

The rule is Subtract 7. Subtract 7 from each number.

Subtract 7	
14	7
15	8
16	9

Share and Show

MATH BOARD

Follow a rule to complete the table.

1.
Subtract 3	
9	
10	
11	

2.
Subtract 4	
6	
8	
10	

3.
Subtract 5	
6	
8	
10	

4.
Subtract 8	
9	
11	
13	

5.
Subtract 7	
12	
13	
14	

6.
Subtract 6	
6	
8	
9	

Math Talk How can Exercise 2 help you solve Exercise 3?

Getting Ready for Grade 2

Follow a rule to complete the table.

7.

Subtract 4	
11	
12	
13	

8.

Subtract 6	
7	
8	
9	

9.

Subtract 5	
7	
8	
9	

10.

Subtract 7	
13	
14	
15	
16	

11.

Subtract 8	
12	
14	
16	
17	

12.

Subtract 9	
12	
14	
16	
17	

Problem Solving Real World

13. Solve. Complete the table.

Jane has 4 cookies.
Lucy has 3 cookies.
Seamus has 2 cookies.

How many cookies will each child have if they each eat 2 cookies?

Jane	4	
Lucy	3	
Seamus	2	

TAKE HOME ACTIVITY • Copy Exercise 12 and change the numbers in the left column to 10, 11, 12, and 13. Have your child complete the table and explain how he or she used a rule to solve the problem.

Name _____

Algebra • Follow the Rule

Essential Question How can you follow a rule to complete an addition or subtraction function table?

Model and Draw

The rule for some tables is to add. For other tables the rule is to subtract.

Add 1	
2	3
4	
6	
8	

Subtract 1	
2	1
4	
6	
8	

Share and Show

MATH BOARD

Follow a rule to complete the table.

1.
Add 2	
10	
9	
8	
7	

2.
Subtract 2	
10	
9	
8	
7	

3.
Subtract 1	
3	
4	
7	
9	

Math Talk What is the rule for the pattern in Exercise 1?

Getting Ready for Grade 2

Follow a rule to complete the table.

4.

Add 5	
7	
8	
9	
10	

5.

Subtract 5	
7	
8	
9	
10	

6.

Subtract 1	
8	
9	
11	
13	

7.

Subtract 3	
5	
7	
9	
11	

8.

Add 4	
6	
7	
8	
9	

9.

Add 6	
9	
8	
7	
6	

Problem Solving Real World

10. Find the rule. Complete the table.

3	
	8
7	10
	12

Name _____

Add 3 Numbers

Essential Question How can you choose a strategy to help add 3 numbers?

Model and Draw

When you add 3 numbers, you can add in any order.
Using a strategy can help.

Make a 10.	**Use doubles.**	**Use count on.**

$$\begin{array}{r} 2 \\ 6 \\ + 8 \\ \hline 16 \end{array} \quad \begin{array}{r} 10 \\ + 6 \\ \hline \end{array}$$

$$\begin{array}{r} 8 \\ 8 \\ + 4 \\ \hline 20 \end{array} \quad \begin{array}{r} 16 \\ + 4 \\ \hline \end{array}$$

$$\begin{array}{r} 6 \\ 8 \\ + 3 \\ \hline 17 \end{array} \quad \begin{array}{r} 9 \\ + 8 \\ \hline \end{array}$$

Share and Show

MATH BOARD

Use strategies to find the sums. Circle any strategy you use.

1.
$$\begin{array}{r} 4 \\ 7 \\ + 7 \\ \hline \end{array}$$
make a 10
doubles
count on

2.
$$\begin{array}{r} 9 \\ 8 \\ + 1 \\ \hline \end{array}$$
make a 10
doubles
count on

3.
$$\begin{array}{r} 4 \\ 6 \\ + 2 \\ \hline \end{array}$$
make a 10
doubles
count on

4.
$$\begin{array}{r} 8 \\ 4 \\ + 2 \\ \hline \end{array}$$
make a 10
doubles
count on

5.
$$\begin{array}{r} 6 \\ 3 \\ + 6 \\ \hline \end{array}$$
make a 10
doubles
count on

6.
$$\begin{array}{r} 6 \\ 7 \\ + 4 \\ \hline \end{array}$$
make a 10
doubles
count on

Math Talk Explain why you used the make a 10 strategy to solve Exercise 6.

Getting Ready for Grade 2

Use a strategy to find the sum. Circle the strategy you choose.

7.	5 make a 10 5 doubles + 5 count on	8.	7 make a 10 3 doubles + 5 count on	9.	3 make a 10 8 doubles + 8 count on
10.	4 make a 10 2 doubles + 7 count on	11.	2 make a 10 9 doubles + 2 count on	12.	9 make a 10 9 doubles + 1 count on
13.	9 make a 10 2 doubles + 8 count on	14.	6 make a 10 3 doubles + 7 count on	15.	8 make a 10 4 doubles + 1 count on

Problem Solving Real World

16. Christine has 7 red buttons, 3 blue buttons, and 4 yellow buttons. How many buttons does she have?

_____ buttons

TAKE HOME ACTIVITY • Ask your child to choose 3 numbers from 1 to 9. Have your child add to find the sum.

GR16 sixteen

Add a One-Digit Number to a Two-Digit Number

Essential Question How can you find the sum of a 1-digit number and a 2-digit number?

Model and Draw

What is 54 + 2?

To find the sum, find how many **tens** and **ones** in all.

5 tens 4 ones	5 4
+ 2 ones	+ 2
_5_ tens _6_ ones	5 6

Share and Show

MATH BOARD

Add. Write the sum.

1. 72 + 3	2. 24 + 1	3. 41 + 4	4. 56 + 2
5. 14 + 4	6. 33 + 6	7. 61 + 8	8. 93 + 4
9. 31 + 6	10. 11 + 7	11. 40 + 4	12. 35 + 3

Math Talk How did you find the total number of ones in Exercise 1?

Add. Write the sum.

13. $\begin{array}{r} 22 \\ +\ 7 \\ \hline \end{array}$	**14.** $\begin{array}{r} 53 \\ +\ 3 \\ \hline \end{array}$	**15.** $\begin{array}{r} 46 \\ +\ 2 \\ \hline \end{array}$	**16.** $\begin{array}{r} 71 \\ +\ 8 \\ \hline \end{array}$
17. $\begin{array}{r} 84 \\ +\ 5 \\ \hline \end{array}$	**18.** $\begin{array}{r} 93 \\ +\ 4 \\ \hline \end{array}$	**19.** $\begin{array}{r} 16 \\ +\ 3 \\ \hline \end{array}$	**20.** $\begin{array}{r} 37 \\ +\ 1 \\ \hline \end{array}$
21. $\begin{array}{r} 62 \\ +\ 2 \\ \hline \end{array}$	**22.** $\begin{array}{r} 23 \\ +\ 5 \\ \hline \end{array}$	**23.** $\begin{array}{r} 82 \\ +\ 2 \\ \hline \end{array}$	**24.** $\begin{array}{r} 44 \\ +\ 4 \\ \hline \end{array}$

Problem Solving Real World

25. There are 23 children in the first grade class. Then 3 more children join the class. How many children are there now?

_____ children

TAKE HOME ACTIVITY • Tell your child you had 12 pennies and then you got 5 more. Have your child add to find how many pennies in all.

Add Two-Digit Numbers

Essential Question How can you find the sum of
two 2-digit numbers?

Model and Draw

What is 23 + 14?

You can find how many **tens** and **ones** in all.

2 tens	**3** ones		**2 3**
+ 1 ten	**4** ones		**+ 1 4**
3 tens	**7** ones		**37**

Share and Show

MATH BOARD

Add. Write the sum.

1. 82
   + 12

2. 25
   + 43

3. 15
   + 14

4. 71
   + 12

5. 36
   + 21

6. 43
   + 41

7. 57
   + 32

8. 21
   + 12

9. 12
   + 12

10. 41
    + 21

11. 32
    + 41

12. 51
    + 14

Math Talk   How many tens are in 26 + 11?
How do you know?

Getting Ready for Grade 2

Add. Write the sum.

13. 83
     + 12

14. 73
     + 21

15. 16
     + 51

16. 23
     + 43

17. 24
     + 55

18. 67
     + 21

19. 64
     + 23

20. 51
     + 24

21. 26
     + 32

22. 51
     + 25

23. 46
     + 22

24. 34
     + 45

Problem Solving Real World

25. Emma has 21 hair clips.
Her sister has 11 hair clips.
How many hair clips do
the girls have together?

_____ hair clips

TAKE HOME ACTIVITY • Tell your child you drove 21 miles and then you drove
16 more. Have your child add to find how many miles in all.

Repeated Addition

Essential Question How can you find how many items there are in equal groups without counting one at a time?

Model and Draw

When all groups have the same number they are equal groups.

Ayita is putting 2 plants on each step up to her porch. She has 4 steps. How many plants does she need?

There are 4 equal groups. There are 2 in each group. Add to find how many in all.

$$\underline{2} + \underline{2} + \underline{2} + \underline{2} = \underline{8}$$

Ayita needs __8__ plants.

Share and Show

MATH BOARD

Use your MathBoard and ⬤. Make equal groups. Complete the addition sentence.

	Number of Equal Groups	Number in Each Group	How many in all?
1.	4	3	___ + ___ + ___ + ___ = ___
2.	2	5	___ + ___ = ___
3.	3	4	___ + ___ + ___ = ___

Math Talk How can you use addition to find 5 groups of 4?

Use your MathBoard and ●. Make equal
groups. Complete the addition sentence.

	Number of Equal Groups	Number in Each Group	How many in all?
4.	2	3	___ + ___ = ___
5.	3	5	___ + ___ + ___ = ___
6.	4	4	___ + ___ + ___ + ___ = ___
7.	4	5	___ + ___ + ___ + ___ = ___
8.	5	7	___ + ___ + ___ + ___ + ___ = ___

Problem Solving Real World

Solve.

9. There are 3 flower pots. There are 2 flowers in each flower pot. How many flowers are there?

___ flowers

10. There are 2 plants. There are 4 leaves on each plant. How many leaves are there?

___ leaves

TAKE HOME ACTIVITY • Use dry cereal or pasta to make 3 equal groups of 5. Ask your child to find the total number of items.

Use Repeated Addition to Solve Problems

Essential Question How can you use repeated addition to solve problems?

Model and Draw

Dyanna will have 3 friends at her party. She wants to give each friend 4 balloons. How many balloons does Dyanna need?
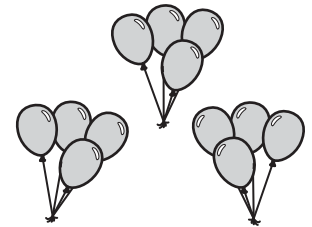
_12_ balloons

THINK $4 + 4 + 4 = 12$

Share and Show

MATH BOARD

Draw pictures to show the story.
Write the addition sentence to solve.

1. Ted plays with 2 friends. He wants to give each friend 5 cards. How many cards does Ted need?

____ cards

2. Aisha shops with 4 friends. She wants to buy each friend 2 roses. How many roses does Aisha need?
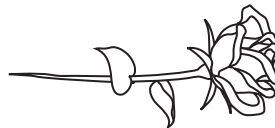
____ roses

Math Talk What pattern can you use to find the answer to Exercise 2?

Draw pictures to show the story.
Write the addition sentence to solve.

3. Lea plays with 3 friends. She wants to give each friend 5 ribbons. How many ribbons does Lea need?

_____ ribbons

4. Harry shops with 5 friends. He wants to buy each friend 2 pens. How many pens does Harry need?

_____ pens

5. Cam plays with 4 friends. She wants to give each friend 4 stickers. How many stickers does Cam need?

_____ stickers

Problem Solving (Real World)

Circle the way you can model the problem. Then solve.

6. There are 4 friends. Each friend has 3 apples. How many apples are there?

4 groups of 4 apples

4 groups of 3 apples

3 groups of 4 apples

There are _____ apples.

TAKE HOME ACTIVITY • Use small items such as cereal pieces to act out each problem. Have your child check the answers on this page.

Choose a Nonstandard Unit to Measure Length

Essential Question How can you decide which nonstandard unit to use to measure the length of an object?

Model and Draw

Use ⬭ to measure short things.

Use ✏ to measure long things.

Share and Show

MATH BOARD
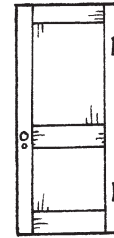
Use real objects. Circle the unit you would use to measure. Then measure.

	Object	Unit	Measurement
1.		⬭ / ✏	about _____
2.		⬭ / ✏	about _____
3.		⬭ / ✏	about _____
4.		⬭ / ✏	about _____

Math Talk Alex measured a book with ⬭. Then he measured with ✏. Did he use more ⬭ or ✏? Explain.

Use real objects. Choose a unit to measure
the length. Circle it. Then measure.
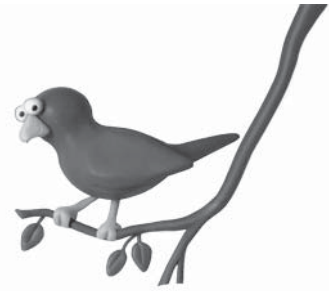
	Object	Unit	Measurement
5.			about ____
6.			about ____
7.			about ____
8.			about ____

Problem Solving *Real World*

9. Fred uses 🎲 to measure the stick.
Sue measures the stick and gets the same measurement.
Circle the unit that Sue uses.

TAKE HOME ACTIVITY • Have your child measure something around the house by using small objects such as paper clips and then by using larger objects such as pencils. Discuss why the measurements differ.

Name _____

Use a Non-Standard Ruler

Essential Question How can you use a non-standard measuring tool to find length?

Model and Draw

About how long is the pencil?
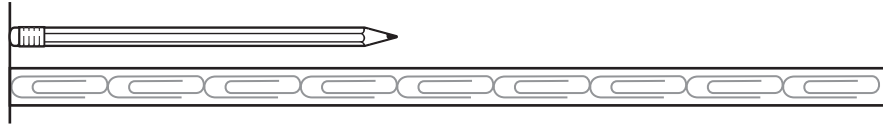
The end of the pencil and the end of the ⌔ must line up. Count how many ⌔ from one end of the pencil to the other.

about __4__ ⌔

Share and Show

MATH BOARD

About how long is the string?

1.
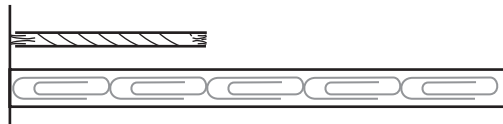
about ____ ⌔

2.
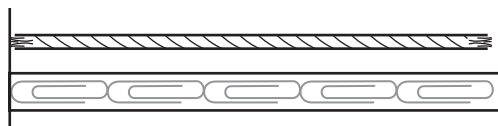
about ____ ⌔

Math Talk In Exercise 1, why must the end of the pencil and the end of the ⌔ line up?

Getting Ready for Grade 2

twenty-nine **GR29**

About how long is the string?

3.
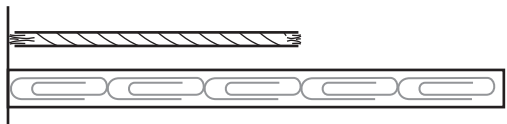
about ____ �

4.
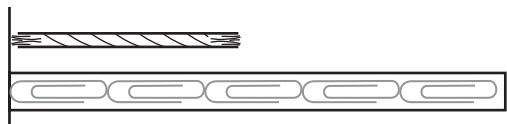
about ____ �

5.
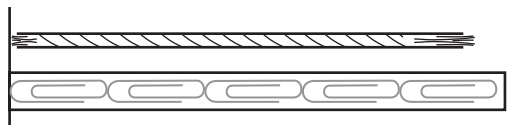
about ____ �

Problem Solving Real World

6. Wendy measures her pencil. She says it is about 2 � long. Is she correct? Explain.

_____

_____
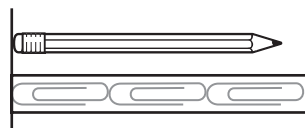
TAKE HOME ACTIVITY • Have your child use 20 paper clips to measure different small objects in your house. Be sure the paper clips touch end to end.

Compare Lengths

Essential Question How can you compare lengths of objects?

Model and Draw

First, write 1, 2, and 3 to order the strings from **shortest** to **longest**.
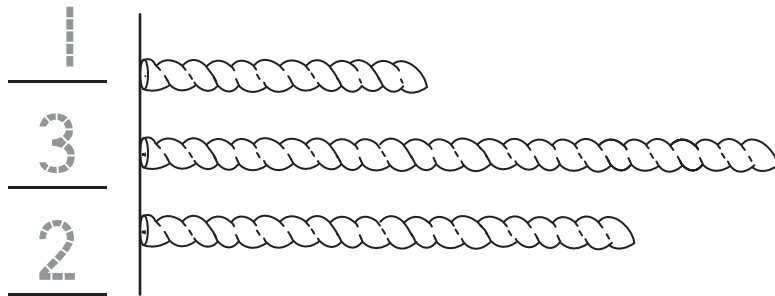
Then measure with ⬚.

1 | ⬛⬛⬛⬛⬛⬛   about __4__ ⬚   ←Shortest

3 | ⬛⬛⬛⬛⬛⬛⬛⬛⬛⬛   about __8__ ⬚   ←Longest

2 | ⬛⬛⬛⬛⬛⬛⬛   about __6__ ⬚

Share and Show

MATH BOARD

Write 1, 2, and 3 to order the strings from **shortest** to **longest**. Then measure with ⬚. Write the lengths.
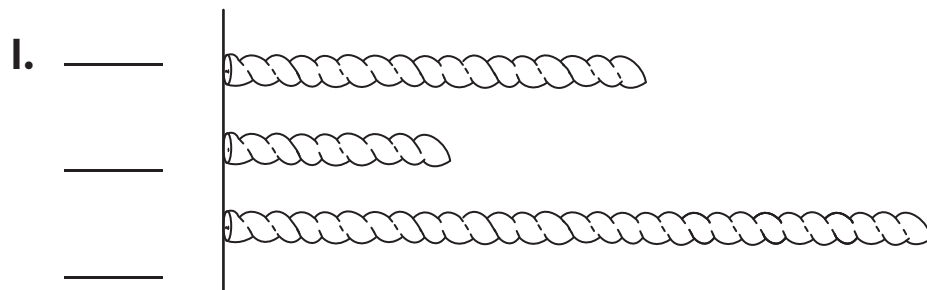
I. ___ | ⬛⬛⬛⬛⬛⬛⬛⬛⬛   about ____ ⬚

___ | ⬛⬛⬛⬛   about ____ ⬚

___ | ⬛⬛⬛⬛⬛⬛⬛⬛⬛⬛⬛   about ____ ⬚

Math Talk How can measuring with cubes tell you the order of the strings?

2. Write I, 2, and 3 to order the strings from **shortest** to **longest**. Then measure with 🔲. Write the lengths.

_____   about ____ 🔲

_____   about ____ 🔲

_____   about ____ 🔲

3. Write I, 2, and 3 to order the strings from **shortest** to **longest**. Then measure with 🔲. Write the lengths.

_____   about ____ 🔲

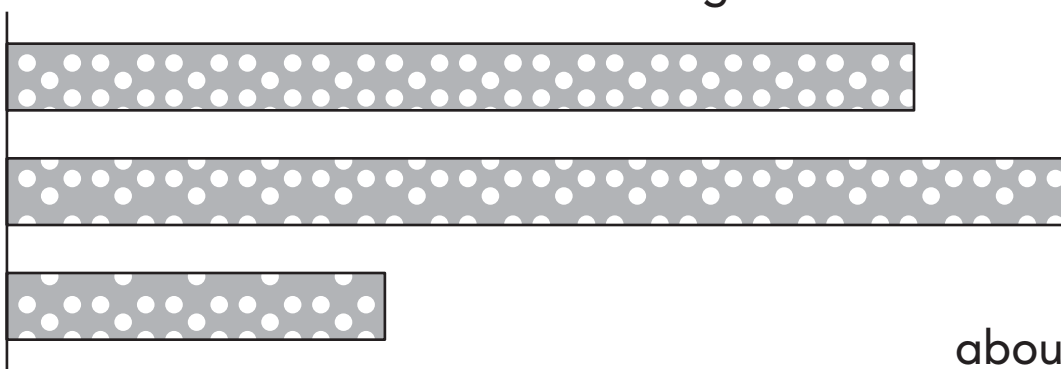_____   about ____ 🔲

_____   about ____ 🔲

Problem Solving Real World

4. Kate has these ribbons. Kate gives Hannah the longest one. Measure with 🔲 and write the length of Hannah's ribbon.

about ____ 🔲

TAKE HOME ACTIVITY • Give your child three strips of paper. Have your child cut them about 4 paper clips long, about 2 paper clips long, and about 5 paper clips long. Then have your child order the paper strips from shortest to longest.

GR32 thirty-two

Time to the Hour and Half Hour

Essential Question How do you tell time to the hour and half hour on an analog clock?

Model and Draw

The hour hand and the minute hand show the time.
Write the time shown on the clock.

4:00   **4:30**

Share and Show

MATH BOARD

Read the clock. Write the time.

1.   **2.**   **3.**
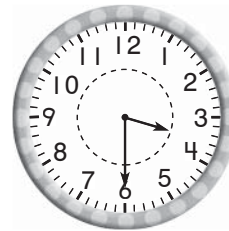
_____   _____   _____

Math Talk   Why does the hour hand point halfway between 5 and 6 at half past 5:00?

Read the clock. Write the time.

4.

_____

5.

_____

6.
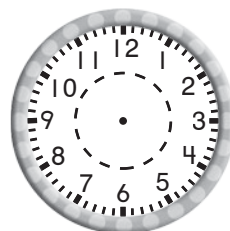

_____

7.

_____

8.

_____

9.

_____

Problem Solving Real World

Draw and write to show the time.

10. Liam has soccer practice at half past 10:00.

_____

TAKE HOME ACTIVITY • Say a time, such as half past 1:00 or 7:00. Ask your child where the clock hands will point at that time.