

A STORY OF UNITS

## **Mathematics Curriculum**



### Grade 1 • MODULE 2

Introduction to Place Value Through Addition and Subtraction Within 20

# **PROBLEM SETS**

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Version 3

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## Introduction to Place Value Through Addition and Subtraction Within 20

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Read the math story. Make a simple math drawing with labels. Circle 10 and solve. 1. Bill went to the store. He bought 1 apple, 9 bananas, and 6 pears. How many pieces of fruit did he buy in all? (apple banana pears 00000 00000 10 10 10 10 10 10 10 10 1	Name	Date
1. Bill went to the store. He bought 1 apple, 9 bananas, and 6 pears. How many pieces of fruit did he buy in all? apple banana pears 000000000000000000000000000000000000	Read t	e math story. Make a simple math drawing with labels. Circle)10 and solve.
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$\frac{10}{(1 + 9)} + 6 = $ $10 + $ Bill bought pieces of fruit.		×
1 + 9 / + 0 = 10 + = Bill bought pieces of fruit.		
10 + = Bill bought pieces of fruit.		
Bill bought pieces of fruit.		10 + =
		Bill bought pieces of fruit.

2. Maria gets some new toys for her birthday. She gets 4 dolls, 7 balls, and 3 games. How many toys did she receive?





Lesson 1: Solve word problems with three addends, two of which make ten.

3. Maddy goes to the pond and catches 8 bugs, 3 frogs, and 2 tadpoles. How many animals did she catch altogether?



4. Molly arrived at the party first with 4 red balloons. Kenny came next with 2 green balloons. Dara came last with 6 blue balloons. How many balloons did these friends bring?





Lesson 1: Solve word problems with three addends, two of which make ten.



Lesson 2:

Use the associative and commutative properties to make ten with three addends.



<sup>6.</sup> <b>10</b>	7.
9 + 1 + 5 =	8 + 2 + 4 =
<sup>8.</sup>	9.
3 + 5 + 5 =	3 + 6 + 7 =



Lesson 2: Use the associative and commutative properties to make ten with three addends.

Name \_\_\_\_\_

Date \_\_\_\_\_

Draw and(circle) to show how you made ten to help you solve the problem.

1. Maria has 9 snowballs, and Tony has 6. How many snowballs do they have in all?



2. Bob has 9 raisins, and Jonny has 4. How many raisins do they have altogether?



Bob and Jonny have \_\_\_\_\_ raisins altogether.



3. There are 3 chairs on the left side of the classroom and 9 on the right side. How many total chairs are in the classroom?



4. There are 7 children sitting on the rug and 9 children standing. How many children are there in all?





Lesson 3: Make ten when one addend is 9.

Name \_\_\_\_\_

Date

Change the picture to make ten. Write the easier number sentence and solve.

1. Tom has 9 red pencils and 5 yellow. How many pencils does Tom have in all?



Solve. Make math drawings using the ten-frame to show how you made 10 to solve.



9 + 5 = 4. \_\_\_\_\_+ \_\_\_\_\_ = \_\_\_\_\_ 6 + 9 = \_\_\_\_ 5. + = 8 + 9 = \_\_\_\_ 6. + =

Solve. Use a number bond to show how you made ten.

7. **5 + 9 =** \_\_\_\_\_



Name	Date	
		_

Make ten to solve. Use the number bond to show how you took the 1 out.

1. Sue has 9 tennis balls and 3 soccer balls. How many balls does she have?





 Compare efficiency of counting on and making ten when one addend is 9.



7. 9 + \_\_\_\_ = \_\_\_\_

Complete the addition sentences.





Lesson 5: Compare efficiency of counting on and making ten when one addend is 9.

Name	Date
Solve. The first one has already been done for you. 1.	Write the bond for the related 10+ fact.
9+2=11 2+9=	$)) \qquad 10 \\ 1 \\ 1$
2. 9 + 6 = 6 + 9 =	
3. 7 + 9 = 9 + 7 =	
Use number bonds to show your thinking. Write	the related 10+ fact.
4. 9 + 4 =	.+=
5. <b>3 + 9 =</b>	.+=
6. <b>9 + 5 =</b>	.+=



Lesson 6: Use the commutative property to make ten.

7. Match the equal expressions.



- 8. Complete the addition sentences to make them true.
  - a. 2 + 10 = \_\_\_\_\_
     b. 7 + 9 = \_\_\_\_\_
     c. \_\_\_\_\_ + 10 = 14

     d. 3 + 9 = \_\_\_\_\_
     e. 3 + 10 = \_\_\_\_\_
     f. \_\_\_\_\_\_ + 9 = 14

     g. 10 + 9 = \_\_\_\_\_
     h. 8 + 9 = \_\_\_\_\_
     i. \_\_\_\_\_\_\_ + 7 = 17

     j. 5 + 9 = \_\_\_\_\_
     k. \_\_\_\_\_\_\_ + 10 = 18
     l. \_\_\_\_\_\_\_\_ + 9 = 17

     m. 6 + 10 = \_\_\_\_\_
     n. \_\_\_\_\_\_\_\_ + 9 = 16



Lesson 6: Use the commutative property to make ten.

Name	Date
$\frown$	

(Circle) to show how you made ten to help you solve.

1. John has 8 tennis balls. Toni has 5. How many tennis balls do they have in all?



8 and \_\_\_\_\_ make \_\_\_\_\_.

10 and \_\_\_\_\_ make \_\_\_\_\_.

John and Toni have \_\_\_\_\_ tennis balls in all.

2. Bob has 8 raisins, and Jenny has 4. How many raisins do they have altogether?

8 and \_\_\_\_\_ make \_\_\_\_\_.

10 and	_ make
--------	--------

Bob and Jenny have \_\_\_\_\_ raisins altogether.



Lesson 7: Make ten when one addend is 8.

3. There are 3 chairs on the right side of the classroom and 8 on the left side. How many total chairs are in the classroom?

8 and \_\_\_\_\_ make \_\_\_\_\_.

10 and \_\_\_\_\_ make \_\_\_\_\_.

There are \_\_\_\_\_ total chairs.

4. There are 7 children sitting on the rug and 8 children standing. How many children are there in all?

8 and \_\_\_\_\_ make \_\_\_\_\_.

10 and	_ make	
--------	--------	--

There are \_\_\_\_\_ children in all.



Lesson 7: Make ten when one addend is 8.

Name

Date

 $\frown$ 

(Circle) to make ten. Write the 10+ number sentence and solve.

1. Tom only has 8 goldfish and 5 angelfish. How many fish does Tom have in all?









Solve. Make math drawings using the ten-frame to show how you made ten to solve.





Solve. Use a number bond to show how you made a ten.

7. 5 + 8 =\_\_\_\_



Name	Date
Make ten to solve. Use a number bo	and to show how you took 2 out to make ten.
1. Ben has 8 green grapes and 3 pu	irple grapes. How many grapes does he have?
8 + 3 =	10 + =
	Ben has grapes.
2. <b>8 + 4 =</b>	10 + =
Use number bonds to show your thir	nking. Write the 10+ fact.
3. 8 + 5 =	+ =
4. 8 + 7 =	+ =
5. <b>4 + 8 =</b>	+ =
6. <b>7 + 8 =</b>	+ =
7. 8 + = 17	+ =



Lesson 9: Compare efficiency of counting on and making ten when one addend is 8.

8. a. 10 + 1 =		b. 8 + 3 =11
9. a. 10 + 5 =	15	b. 8 + 7 = 15
10. a. 10 + 6 =		b. 8 + 8 =
11. a. 2 + 10 =		b. 4 + 8 =
12. a. 4 + 10 =		b. 6 + 8 =

Complete the addition sentences and number bonds.



Lesson 9:

Compare efficiency of counting on and making ten when one addend is 8.

Name \_\_\_\_\_

Date\_\_\_\_\_

Solve. Use number bonds or 5-group drawings if needed. Write the equal ten-plus number sentence.

1. 4 + 9 =	2. 6 + 8 =	3. 7 + 4 =
10 + =	10 + =	10 + =

4. Match the equal expressions.





Complete the addition sentences to make them true.

a.	b.	с.
5. <b>9 + 2 =</b>	8 + 4 =	7 + 5 =
6. 9 + 5 =	8 + 3 =	7 + 6 =
7. 6 + 9 =	6 + 8 =	4 + 7 =
8. 7 + 9 =	5 + 8 =	7 + 7 =
9. 9 + = 17	8 + = 16	7 + = 16
10 + 9 = 15	+ 8 = 15	+ 7 = 17



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

Jeremy had 7 big rocks and 8 little rocks in his pocket.

How many rocks does Jeremy have?

1. Circle all student work that correctly matches the story.



2. Fix the work that was incorrect by making a new drawing in the space below with the matching number sentence.



Solve on your own. Show your thinking by drawing or writing. Write a statement to answer the question.

3. There are 4 vanilla cupcakes and 8 chocolate cupcakes for the party. How many cupcakes were made for the party?

4. There are 5 girls and 7 boys on the playground. How many students are on the playground?

When you are done, share your solutions with a partner. How did your partner solve each problem? Be ready to share how your partner solved the problems.



Name

Make a simple math drawing. Cross out from the 10 ones or the other part in order to show what happens in the stories.

 Bill has 16 grapes. 10 are on one vine, and 6 are on the ground. Bill eats 9 grapes from the vine. How many grapes does Bill have left?





Bill has \_\_\_\_\_ grapes now.

2. 12 frogs are in the pond. 10 are on a lily pad, and 2 are in the water. 9 frogs hop off the lily pad and out of the pond. How many frogs are in the pond?



There are \_\_\_\_\_ frogs still in the pond.

3. Kim has 14 stickers. 10 stickers are on the first page, and 4 stickers are on the second page. Kim loses 9 stickers from the first page. How many stickers are still in her book?



Kim has \_\_\_\_\_ stickers in her book.



4. 10 eggs are in a carton, and 5 eggs are in a bowl. Joe's father cooks 9 eggs from the carton. How many eggs are left?



There are \_\_\_\_ eggs left.

5. Jana had 10 wrapped gifts on the table and 7 wrapped gifts on the floor. She unwrapped 9 gifts from the table. How many gifts are still wrapped?



Jana has \_\_\_\_ gifts still wrapped.

6. There are 10 cupcakes on a tray and 8 on the table. On the tray, there are 9 vanilla cupcakes. The rest of the cupcakes are chocolate. How many cupcakes are chocolate?



There are \_\_\_\_ chocolate cupcakes.



Lesson 12: Solve word problems with subtraction of 9 from 10.

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

Solve. Use 5-group rows, and cross out to show your work.

1. Mike has 10 cookies on a plate and 3 cookies in a box. He eats 9 cookies from the plate. How many cookies are left?



Mike has \_\_\_\_ cookies left.

2. Fran has 10 crayons in a box and 5 crayons on the desk. Fran lends Bob 9 crayons from the box. How many crayons does Fran have to use?



Fran has \_\_\_\_ crayons to use.

3. 10 ducks are in the pond, and 7 ducks are on the land. 9 of the ducks in the pond are babies, and all the rest of the ducks are adults. How many adult ducks are there?



There are \_\_\_\_ adult ducks.



With a partner, create your own stories to match, and solve the number sentences. Make a number bond to show the whole as 10 and some ones. Draw 5-group rows to match your story. Write the complete number sentence on the line.



Lesson 13: Solve word problems with subtraction of 9 from 10.

1. Match the pictures with the number sentences.





Name	Date	
-		

1. Match the pictures with the number sentences.

α.	13 - 9 = 4	-00000 00000	00000 0
b.	14 - 9 = 5	-00000 00000	0000 000
C.	17 - 9 = 8	<del>-00000 0000</del> 0	000
d.	18 - 9 = 9	-00000 00000	00000 00
e.	16 - 9 = 7	-00000 00000	0000

Draw 5-group rows. Visualize and then cross out to solve. Complete the number sentences.







- 10. Show making 10 and taking from 10 to complete the two number sentences.
  - a. 5+9=\_\_\_\_ b. 14-9=\_\_\_\_
- 11. Make a number bond for Problem 10. Write two additional number sentences that use this number bond.





Lesson 15: Model subtraction of 9 from teen numbers.

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

Solve the problem by counting on (a) and using a number bond to take from ten (b).

- 1. Lucy had 12 balloons at her birthday party. She gave 9 balloons to her friends. How many balloons did she have left?
  - a. 12 9 = \_\_\_\_

Lucy had \_\_\_\_ balloons left.

- 2. Justin had 15 blueberries on his plate. He ate 9 of them. How many does he have left to eat?
  - a. 15 9 = \_\_\_\_

Justin has \_\_\_\_ blueberries left to eat.



Complete the subtraction sentences by using the take from ten strategy and counting on. Tell which strategy you would prefer to use for Problems 3 and 4.

3.	a. 11 - 9 =	b. 11 - 9 =	<pre>take from ten count on</pre>
4.	a. 18 - 9 =	b. 18 - 9 =	<pre>take from ten count on</pre>

5. Think about how to solve the following subtraction problems:

16 - 9	12 - 9	18 - 9
11 - 9	15 - 9	14 - 9
13 - 9	19 - 9	17 - 9

Choose which problems you think are easier to count on from 9 and which are easier to use the take from ten strategy. Write the problems in the boxes below.

Problems to use the *count on* strategy with:

Problems to use the take from ten strategy with:

Were there any problems that were just as easy using either method? Did you use a different method for any problems?



Name	Date

1. Match the pictures with the number sentences.



Circle 10 and subtract.

2. 13 - 8 =	3. 11 - 8 =
ÓÓÓÓ ÓÓÓÓ	
<b>ÓÓÓÓÓ</b>	

I





Draw and circle 10, **or** break apart the teen number with a number bond. Then subtract.



Name	Date	
		-

1. Match the pictures with the number sentences.

a. 13 - 8 = 5	- <del>0000 000</del> 00	00000 00
b. 14 - 8 = 6	<del>-0000 000</del> 00	0000
c. 17 - 8 = 9	- <del>0000 000</del> 00	000
d. 18 - 8 = 10	<del>-00000 000</del> 00	00000 0
e 16 - 8 - 8	<del>-0000 000</del> 00	0000 000

Make a math drawing of a 5-group row and some ones to solve the following problems. Write the addition sentence that shows how to add the parts after subtracting 8 or 9.

2. 11 - 8 = \_\_\_\_\_

3. 12 - 8 = \_\_\_\_

4. 15 - 8 = \_\_\_\_\_



5. 19 - 8 = \_\_\_\_

6. 16 - 8 = \_\_\_\_

7. 16 - 9 = \_\_\_\_

8. 14 - 9 = \_\_\_\_

9. Show how to make ten and take from ten to solve the two number sentences.

a. 6 + 8 = \_\_\_\_\_

```
b. 14 - 8 = ____
```



Name

Date \_\_\_\_\_

Use a number bond to show how you used the take from ten strategy to solve the problem.

1. Kevin had 14 crayons. Eight of the crayons were broken. How many of his crayons were not broken?

14 - 8 = \_\_\_\_\_



Kevin had \_\_\_\_ crayons that were not broken.

Use number bonds to show your thinking.

2. 17 - 8 = \_\_\_\_\_

3. 18 - 8 = \_\_\_\_\_

Count on to solve.

4. 13 - 8 = \_\_\_\_\_

5. 15 - 8 = \_\_\_\_\_





Complete the subtraction sentences by using the take from ten and count on strategies. Check the strategy that seemed easiest to you.



Name			Date	
Solve the problems below. Use drawings or number bonds.				
1.	11 - 9 =	2.	11 - 8 =	
3.	13 - 9 =	4.	13 - 8 =	
5.	13 - 7 =	6.	12 - 7 =	
7. M	atch the equal expressions.	13 - 9		





Complete the subtraction sentences to make them true.

	a.	b.	с.
8.	12 - 9 =	13 - 9 =	14 - 9 =
9.	12 - 8 =	13 - 8 =	14 - 8 =
10.	11 - 7 =	12 - 7 =	13 - 7 =
11.	16 - 9 =	18 - 9 =	17 - 9 =
12.	16 = 9	15 = 9	15 = 7
13.	15 = 6	11 = 3	16 = 7



There were 16 dogs playing at the park. Seven of the dogs went home. How many of the dogs are still at the park?

1. Circle all the student work that correctly matches the story.



2. Fix the work that was incorrect by making a new drawing in the space below with the matching number sentence.



Solve on your own. Show your thinking by drawing or writing. Write a statement to answer the question.

3. There were 12 sugar cookies in the box. My friend and I ate 5 of them. How many cookies are left in the box?

4. Megan checked out 17 books from the library. She read 9 of them. How many does she have left to read?

When you are done, share your solutions with a partner. How did your partner solve each problem? Be ready to share how your partner solved the problem.



1: Share and critique peer solution strategies for *take from with result unknown* and *take apart with addend unknown* word problems from the teens.

Name		

<u>R</u>ead the word problem. <u>D</u>raw and label.

<u>W</u>rite a number sentence and a statement that matches the story.

1. This week, Maria ate 5 yellow plums and some red plums. If she ate 11 plums in all, how many red plums did Maria eat?

2. Tatyana counted 14 frogs. She counted 8 swimming in the pond and the rest sitting on lily pads. How many frogs did she count sitting on lily pads?



 Solve put together/take apart with addend unknown word problems, and relate counting on to the take from ten strategy.

3. Some children are on the playground. Eight are on the swings, and the rest are playing tag. There are 15 children in all. How many children are playing tag?

4. Oziah read some non-fiction books. Then, he read 7 fiction books. If he read 16 books altogether, how many non-fiction books did Oziah read?

Meet with a partner, and share your drawings and sentences. Talk with your partner about how your drawing matches the story.



Name

Date	

<u>R</u>ead the word problem. <u>D</u>raw and label. <u>W</u>rite a number sentence and a statement that matches the story.

1. Janet read 8 books during the week. She read some more books on the weekend. She read 12 books total. How many books did Janet read on the weekend?

2. Eric scored 13 goals this season! He scored 5 goals before the playoffs. How many goals did Eric score during the playoffs?



3. There were 8 ladybugs on a branch. Some more came. Then, there were 15 ladybugs on the branch. How many ladybugs came?

4. Marco's friend gave him some baseball cards at school. If he was already given 9 baseball cards by his family, and he now has 19 cards in all, how many baseball cards did he get in school?

Meet with a partner and share your drawings and sentences. Talk with your partner about how your drawing matches the story.



**23:** Solve *add to with change unknown* problems, relating varied addition and subtraction strategies.

Name

<u>R</u>ead the word problem. <u>D</u>raw and label. <u>W</u>rite a number sentence and a statement that match the story.

1. Jose sees 11 frogs on the shore. Some of the frogs hop into the water. Now, there are 8 frogs on the shore. How many frogs hopped into the water?

2. Cameron gives some of his apples to his sister. He still has 9 apples left. If he had 15 apples at first, how many apples did he give to his sister?



3. Molly had 16 books. She loaned some to Gia. How many books did Gia borrow if Molly has 8 books left?

4. Eighteen baby goats were playing outside. Some went into the barn. Nine stayed outside to play. How many baby goats went inside?

Meet with a partner and share your drawings and sentences. Talk with your partner about how your drawing tells the story.



Name

Use the expression cards to play Memory. Write the matching expressions to make true number sentences.









5.





Lesson 25:

5: Strategize and apply understanding of the equal sign to solve equivalent expressions.

6. Write a true number sentence using the expressions that you have left over. Use pictures and words to show how you know two of the expressions have the same unknown numbers.

- 7. Use other facts you know to write at least two true number sentences similar to the type above.
- 8. The following addition number sentences are FALSE. Change one number in each problem to make a TRUE number sentence, and rewrite the number sentence.
  - a. 8 + 5 = 10 + 2
    b. 9 + 3 = 8 + 5
    c. 10 + 3 = 7 + 5
- 9. The following subtraction number sentences are FALSE. Change one number in each problem to make a TRUE number sentence, and rewrite the number sentence.

UREKA Lesson 25:	Strategize and apply understanding of the equal sign to solve equivalent expressions.
c. 1 + 3 = 14 - 9	
b. 13 - 9 = 1 + 4	
a. 12 - 8 = 1 + 2	





Show the total and tens and ones with Hide Zero cards. Write how many **tens** and **ones**.





Lesson 26: Identify 1 ten as a unit by renaming representations of 10.

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

Solve the problems. Write your answers to show how many **tens** and **ones**. If there is only 1 ten, cross off the "s."

Add.





Lesson 27: Solve addition and subtraction problems decomposing and composing teen numbers as 1 ten and some ones.

Read the word problem. <u>D</u>raw and label. <u>W</u>rite a number sentence and statement that matches the story. Rewrite your answer to show its tens and ones. If there is only 1 ten or 1 one, cross off the "s."

9. Frankie and Maya made 4 big sandcastles at the beach. If they made 10 small sandcastles, how many total sandcastles did they make?

\_\_\_\_ tens and \_\_\_\_\_ ones

10. Ronnie has 8 stickers that are stars. Her friend Sina gives her 7 more. How many stickers does Ronnie have now?

\_\_\_\_ tens and \_\_\_\_\_ ones

11. We tied 14 balloons to the tables for a party, but 3 floated away! How many balloons were still tied to the tables?

\_\_\_\_\_tens and \_\_\_\_\_ones

12. I ate 5 of the 16 strawberries that I picked. How many did I have left over?

tens and	ones
----------	------



Lesson 27: Solve addition and subtraction problems decomposing and composing teen numbers as 1 ten and some ones.



Solve. Then, write a statement to show your answer.

3. Su-Hean put together a collage with 9 pictures. Adele put together another collage with 6 pictures. How many pictures did they use?



4. Imran has 8 crayons in his pencil case and 7 crayons in his desk. How many crayons does Imran have altogether?





Lesson 28: Solve addition problems using ten as a unit, and write two-step solutions.

5. At the park, there were 4 ducks swimming in the pond. If there were 9 ducks resting on the grass, how many ducks were at the park in all?



6. Cece made 7 frosted cookies and 8 cookies with sprinkles. How many cookies did Cece make?

7. Payton read 8 books about dolphins and whales. She read 9 books about dogs and cats. How many books did she read about animals altogether?





3. Tatyana counted 14 frogs. She counted 8 swimming in the pond and the rest sitting on lily pads. How many frogs did she count sitting on lily pads?



4. This week, Maria ate 5 yellow plums and some red plums. If she ate 11 plums in all, how many red plums did Maria eat?





Lesson 29: Solve subtraction problems using ten as a unit, and write two-step solutions.

5. Some children are on the playground playing tag. Eight are on the swings. If there are 16 children on the playground in all, how many children are playing tag?

 -	 =	
 +	 =	

6. Oziah read some nonfiction books. Then, he read 6 fiction books. If he read 18 books altogether, how many nonfiction books did Oziah read?



7. Hadley has 9 buttons on her jacket. She has some more buttons on her shirt. Hadley has a total of 17 buttons on her jacket and shirt. How many buttons does she have on her shirt?











#### Video tutorials: http://embarc.online



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