

GRADE 2 VOLUME 1

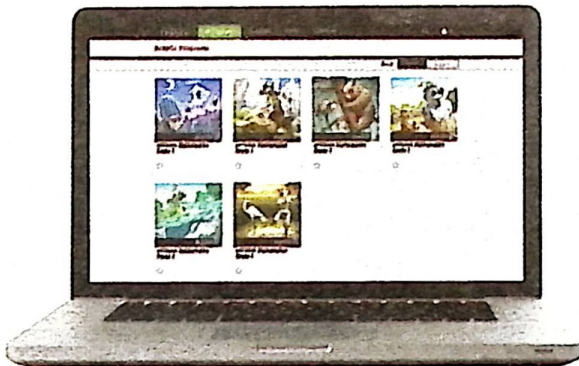
An illustration of a fluffy yellow bear climbing a large, brown tree trunk. The bear is looking back over its shoulder towards a small, purple and white robot. The robot has a round head with a single large eye, antennae, and a body with various mechanical details. It is positioned on a lower branch of the tree, looking up at the bear. The background shows more of the tree's branches and green pine needles against a light blue sky.

enVision[®] Mathematics

SAVVAS

Contents

Digital Resources at SavvasRealize.com



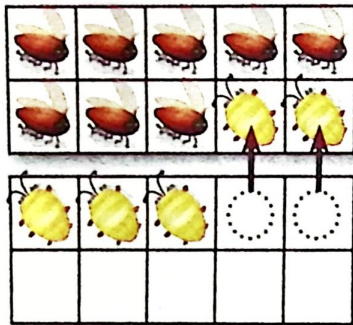
TOPICS

- 1 Fluently Add and Subtract Within 20
- 2 Work with Equal Groups
- 3 Add Within 100 Using Strategies
- 4 Fluently Add Within 100
- 5 Subtract Within 100 Using Strategies
- 6 Fluently Subtract Within 100
- 7 More Solving Problems Involving Addition and Subtraction
- 8 Work with Time and Money
- 9 Numbers to 1,000
- 10 Add Within 1,000 Using Models and Strategies
- 11 Subtract Within 1,000 Using Models and Strategies
- 12 Measuring Length
- 13 Shapes and Their Attributes
- 14 More Addition, Subtraction, and Length
- 15 Graphs and Data

And remember
your Interactive Student
Edition is available at
SavvasRealize.com!



This shows how
you can use ten-frames
to make a 10.



TOPIC I

Fluently Add and Subtract Within 20

enVision® STEM Project	1
Review What You Know	2
Pick a Project	3
3-ACT MATH Preview: Losing Marbles	4
1-1 Addition Fact Strategies	5
1-2 Doubles and Near Doubles	9
1-3 Make a 10 to Add.	13
1-4 Addition Fact Patterns.	17
1-5 Count On and Count Back to Subtract.	21
1-6 Think Addition to Subtract.	25
1-7 Make a 10 to Subtract	29
1-8 Practice Addition and Subtraction Facts	33
1-9 Solve Addition and Subtraction Word Problems	37
1-10 PROBLEM SOLVING Construct Arguments	41
Fluency Practice Activity	45
Vocabulary Review	46
Reteaching	47
Topic Assessment Practice	51
Topic Performance Task	55

This shows how you can use connecting cubes to show that a number is even or odd.



8 is even.

$$4 + 4 = 8$$

9 is odd.

$$5 + 4 = 9$$

TOPIC 2

Work with Equal Groups

enVision® STEM Project.....	57
Review What You Know.....	58
Pick a Project.....	59
2-1 Even and Odd Numbers.....	61
2-2 Continue Even and Odd Numbers.....	65
2-3 Use Arrays to Find Totals.....	69
2-4 Make Arrays to Find Totals.....	73
2-5 PROBLEM SOLVING Model with Math.....	77
Fluency Practice Activity.....	81
Vocabulary Review.....	82
Reteaching.....	83
Topic Assessment Practice.....	85
Topic Performance Task.....	87



This shows how you can add two-digit numbers using a hundred chart.

$$54 + 18 = 72$$

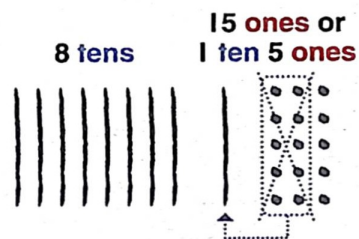
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80

TOPIC 3

Add Within 100 Using Strategies

enVision® STEM Project	89
Review What You Know	90
Pick a Project	91
3-ACT MATH Preview: Piled Up.	92
3-1 Add Tens and Ones on a Hundred Chart	93
3-2 Add Tens and Ones on an Open Number Line	97
3-3 Break Apart Numbers to Add.	101
3-4 Add Using Compensation	105
3-5 Practice Adding Using Strategies	109
3-6 Solve One-Step and Two-Step Problems	113
3-7 PROBLEM SOLVING Construct Arguments	117
Fluency Practice Activity.	121
Vocabulary Review.	122
Reteaching	123
Topic Assessment Practice	127
Topic Performance Task	131

This shows one way you can join tens and ones to find $36 + 59$. Drawings of place-value blocks with regrouping is modeled.



TOPIC 4

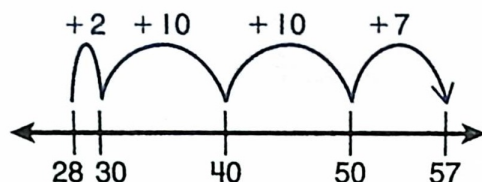
Fluently Add Within 100

enVision® STEM Project	133
Review What You Know	134
Pick a Project	135
4-1 Add 2-Digit Numbers Using Models	137
4-2 Continue to Add 2-Digit Numbers Using Models	141
4-3 Add with Partial Sums	145
4-4 Add Using Mental Math and Partial Sums	149
4-5 Break Apart Numbers and Add Using Mental Math	153
4-6 Add More than Two 2-Digit Numbers	157
4-7 Practice Adding Using Strategies	161
4-8 Solve One-Step and Two-Step Problems	165
4-9 PROBLEM SOLVING Model with Math	169
Fluency Practice Activity	173
Vocabulary Review	174
Reteaching	175
Topic Assessment Practice	179
Topic Performance Task	183





This shows how
you can add up to subtract
on an open number line to
find $57 - 28$.



TOPIC 5

Subtract Within 100 Using Strategies

enVision® STEM Project	185
Review What You Know	186
Pick a Project	187
3-ACT MATH Preview: Laundry Day	188

5-1 Subtract Tens and Ones on a Hundred Chart	189
5-2 Count Back to Subtract on an Open Number Line	193
5-3 Add Up to Subtract Using an Open Number Line	197
5-4 Break Apart Numbers to Subtract	201
5-5 Subtract Using Compensation	205
5-6 Practice Subtracting Using Strategies	209
5-7 Solve One-Step and Two-Step Problems	213
5-8 PROBLEM SOLVING Critique Reasoning	217

Fluency Practice Activity	221
Vocabulary Review	222
Reteaching	223
Topic Assessment Practice	227
Topic Performance Task	231

This shows how you can use place-value blocks to find $34 - 6$ using regrouping.

2 tens 8 ones

TOPIC 6

Fluently Subtract Within 100

enVision® STEM Project	233
Review What You Know	234
Pick a Project	235

6-1	Subtract 1-Digit Numbers Using Models	237
6-2	Subtract 2-Digit Numbers Using Models	241
6-3	Subtract Using Partial Differences	245
6-4	Continue to Subtract Using Partial Differences	249
6-5	Practice Subtracting	253
6-6	Solve One-Step and Two-Step Problems	257
6-7	PROBLEM SOLVING Reasoning	261

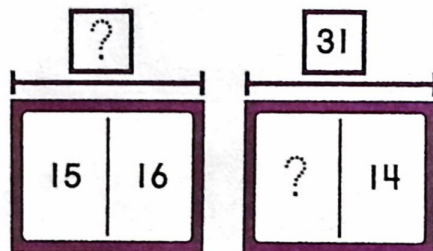
Fluency Practice Activity	265
Vocabulary Review	266
Reteaching	267
Topic Assessment Practice	271
Topic Performance Task	275





This shows how bar diagrams can be used to model and solve a two-step problem.

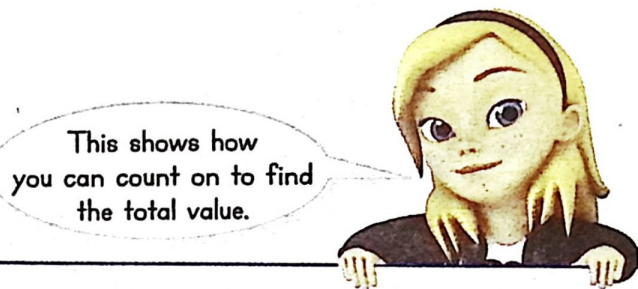
Mia sees 15 yellow birds and 16 red birds. Some birds fly away and now Mia sees 14 birds. How many birds flew away?



TOPIC 7

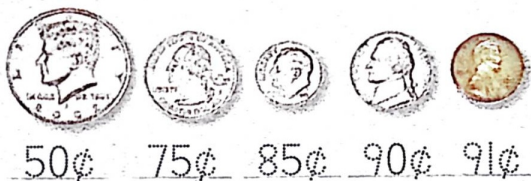
More Solving Problems Involving Addition and Subtraction

enVision® STEM Project	277
Review What You Know	278
Pick a Project	279
3-ACT MATH Preview: The Water Jug	280
7-1 Represent Addition and Subtraction Problems	281
7-2 Mixed Practice: Solve Addition and Subtraction Problems	285
7-3 Continue Practice with Addition and Subtraction Problems	289
7-4 Solve Two-Step Problems	293
7-5 Continue to Solve Two-Step Problems	297
7-6 Make True Equations	301
7-7 Continue to Make True Equations	305
7-8 PROBLEM SOLVING Reasoning	309
Fluency Practice Activity	313
Vocabulary Review	314
Reteaching	315
Topic Assessment Practice	319
Topic Performance Task	323



This shows how you can count on to find the total value.

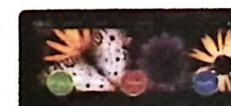
Micah has the coins shown below.
How many cents does Micah have?



TOPIC 8

Work with Time and Money

enVision® STEM Project	325
Review What You Know	326
Pick a Project	327
8-1 Solve Problems with Coins	329
8-2 Continue to Solve Problems with Coins	333
8-3 Solve Problems with Dollar Bills	337
8-4 Continue to Solve Problems with Dollar Bills	341
8-5 PROBLEM SOLVING Reasoning	345
8-6 Tell and Write Time to Five Minutes	349
8-7 Tell Time Before and After the Hour	353
8-8 A.M. and P.M.	357
Fluency Practice Activity	361
Vocabulary Review	362
Reteaching	363
Topic Assessment Practice	367
Topic Performance Task	371



TOPIC
1

Fluently Add and Subtract Within 20

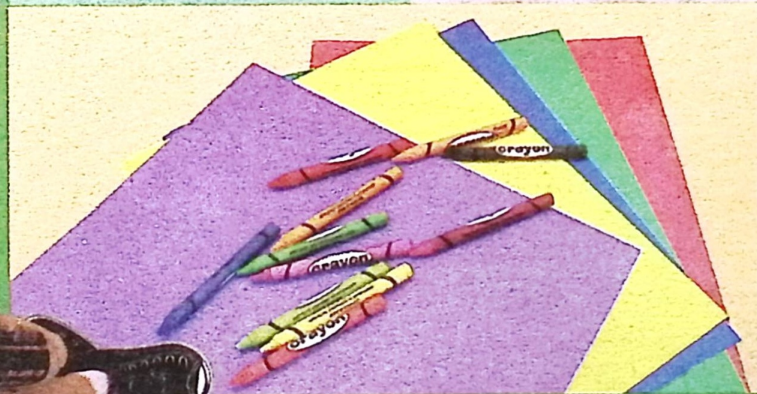
Essential Question: What are strategies for finding addition and subtraction facts?

Digital Resources



Look at the different types of paper!

Different papers have different properties.



Wow!
Let's do this project and learn more.

enVision® STEM Project: Material Math

Find Out Collect different types of paper. Talk about the uses of paper. Tell how strong each type of paper is. Tell how the paper feels. Tell if the paper can soak up water.

Journal: Make a Book Show what you find out in a book. In your book, also:

- Glue samples of paper and tell what you found.
- Choose a type of paper to make flash cards of addition and subtraction facts.

Name _____

Review What You Know

Vocabulary

1. Circle the symbol for equals.

—

+

=

2. Circle the symbol for minus.

—

+

=

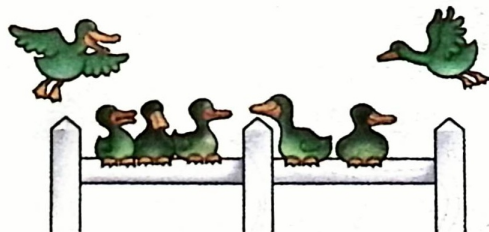
3. Circle the number that is the whole.



$$4 + 2 = 6$$

Subtraction Stories

4. There are 7 birds on a fence. 2 fly away.
How many birds are left?



_____ birds

Addition Stories

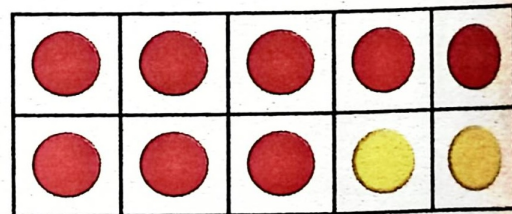
5. Write an equation to solve the problem.

Kate draws 4 big stars.
Then she draws 2 small stars.
How many stars does Kate draw in all?

_____ + _____ = _____

Make 10

6. Write an equation that shows this way to make a 10.



_____ + _____ = _____

Name _____

Pick a Project

PROJECT 1A

What has 8 legs and is big and hairy?

Project: Make an Insect and Spider Poster



PROJECT 1B

What are some fun water facts?

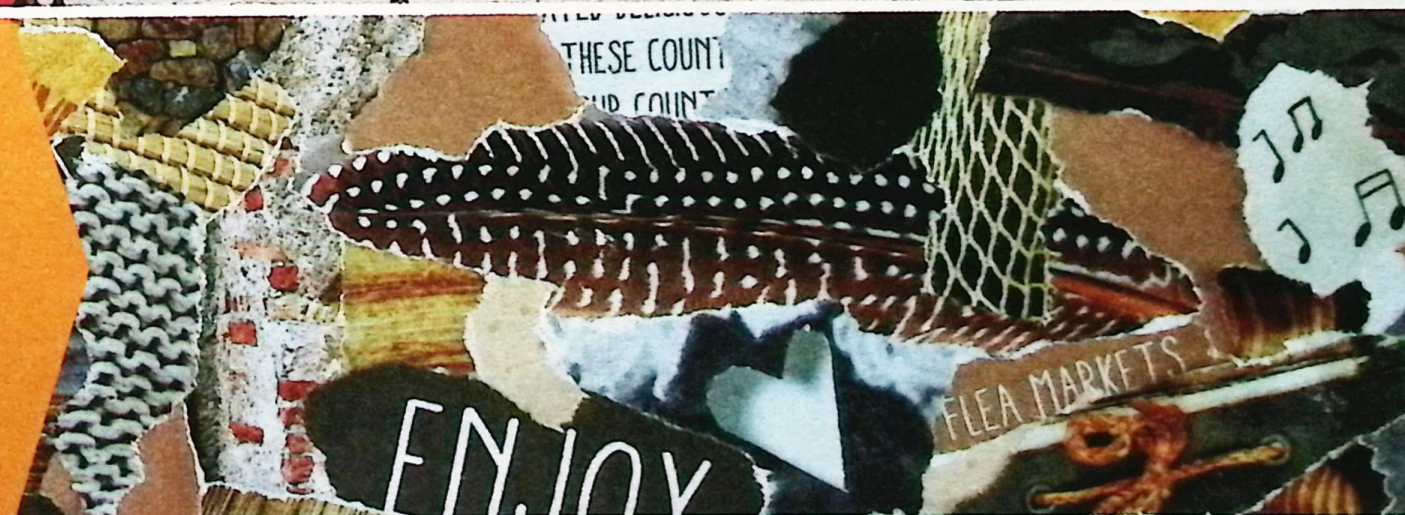
Project: Collect Water Data



PROJECT 1C

Have you seen this different kind of art?

Project: Create a Shape Collage





Activity

Name _____



Use cubes. Show $2 + 5$ and $5 + 2$.

Solve both problems. Explain how the problems are alike and how they are different.

Lesson 1-1

Addition Fact Strategies

I can ...

count on to add and add in any order.

I can also reason about math.



You can count on to find $6 + 3$.



Or count on to find $3 + 6$.



Counting on from the greater number is easier!



An **equation** uses an equal sign (=) to show that the value on the left is the same as the value on the right.

$$6 + 3 = 9$$

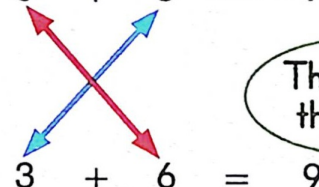


$$3 + 6 = 9$$



You can change the order of the **addends**.

$$6 + 3 = 9$$



The sum is the same.

addend addend **sum**

You can add numbers in any order, and the sum is the same.

$$\text{So, } 6 + 3 = 3 + 6.$$

You can write the facts this way, too.

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



Convince Me! Does $5 + 2 = 2 + 5$?
How do you know?

☆ **Guided Practice** ☆ Count on to find the sum. Then change the order of the addends.



$$3 + 1 = 4$$



$$1 + 3 = 4$$



$$\begin{array}{r} 4 \\ + 3 \\ \hline \square \end{array}$$



$$\begin{array}{r} \square \\ + \square \\ \hline \square \end{array}$$

Name _____

Independent Practice

Count on to find the sum. Then change the order of the addends.
Use cubes if needed.

3. $8 + 2 = \underline{\quad}$

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

4. $8 + 5 = \underline{\quad}$

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

5. $9 + 3 = \underline{\quad}$

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

6. $8 + 7 = \underline{\quad}$

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

7. $7 + 10 = \underline{\quad}$

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

8. $7 + 9 = \underline{\quad}$

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

9.

$$\begin{array}{r} 7 \\ + 2 \\ \hline \square \end{array} \quad + \quad \begin{array}{r} \square \\ \square \\ \hline \square \end{array}$$

10.

$$\begin{array}{r} 6 \\ + 2 \\ \hline \square \end{array} \quad + \quad \begin{array}{r} \square \\ \square \\ \hline \square \end{array}$$

11.

$$\begin{array}{r} 5 \\ + 6 \\ \hline \square \end{array} \quad + \quad \begin{array}{r} \square \\ \square \\ \hline \square \end{array}$$

12. Algebra Write the missing numbers.

$6 + \underline{\quad} = 4 + 6$

$6 + \underline{\quad} = 5 + 6$

$9 + 3 = 3 + \underline{\quad}$

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

$\underline{\quad} + 7 = 7 + 4$

$\underline{\quad} + 8 = 8 + 4$

Problem Solving ★ Solve the problems below.

13. **Model** Joy has 8 bean plants and 6 corn plants in her garden. How many plants does she have in all? Draw a picture to explain your thinking. Then write facts for this story with the addends in a different order.

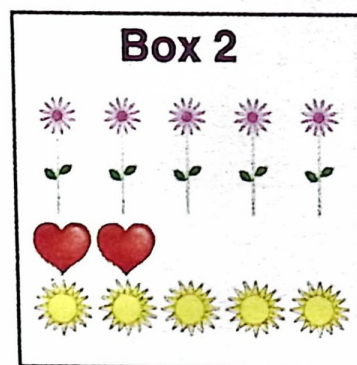
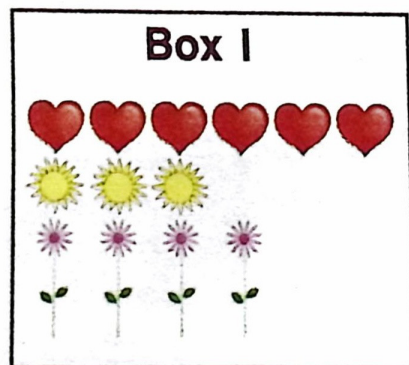
$$\underline{\hspace{1cm}} + \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$$

$$\underline{\hspace{1cm}} + \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$$

Your picture and your equations will show the problem.



14. **Higher Order Thinking** Find the objects in Box 1 and Box 2 that are the same. Write an equation to show how many of each object there are. Then change the order of the addends.



 $\underline{\hspace{1cm}} + \underline{\hspace{1cm}} = \underline{\hspace{1cm}} = \underline{\hspace{1cm}} + \underline{\hspace{1cm}}$

 $\underline{\hspace{1cm}} + \underline{\hspace{1cm}} = \underline{\hspace{1cm}} = \underline{\hspace{1cm}} + \underline{\hspace{1cm}}$

 $\underline{\hspace{1cm}} + \underline{\hspace{1cm}} = \underline{\hspace{1cm}} = \underline{\hspace{1cm}} + \underline{\hspace{1cm}}$

15. ☒ **Assessment Practice** Which shows how to count on to find $7 + 5$?

Ⓐ 7 ... 8, 9, 10, 11, 12

Ⓑ 1, 2, 3, 4, 5

Ⓒ $7 - 5$

Ⓓ 7 ... 8, 9, 10, 11



Activity

Lesson 1-2

Doubles and Near Doubles

I can ...

use doubles and near doubles to add quickly and accurately.

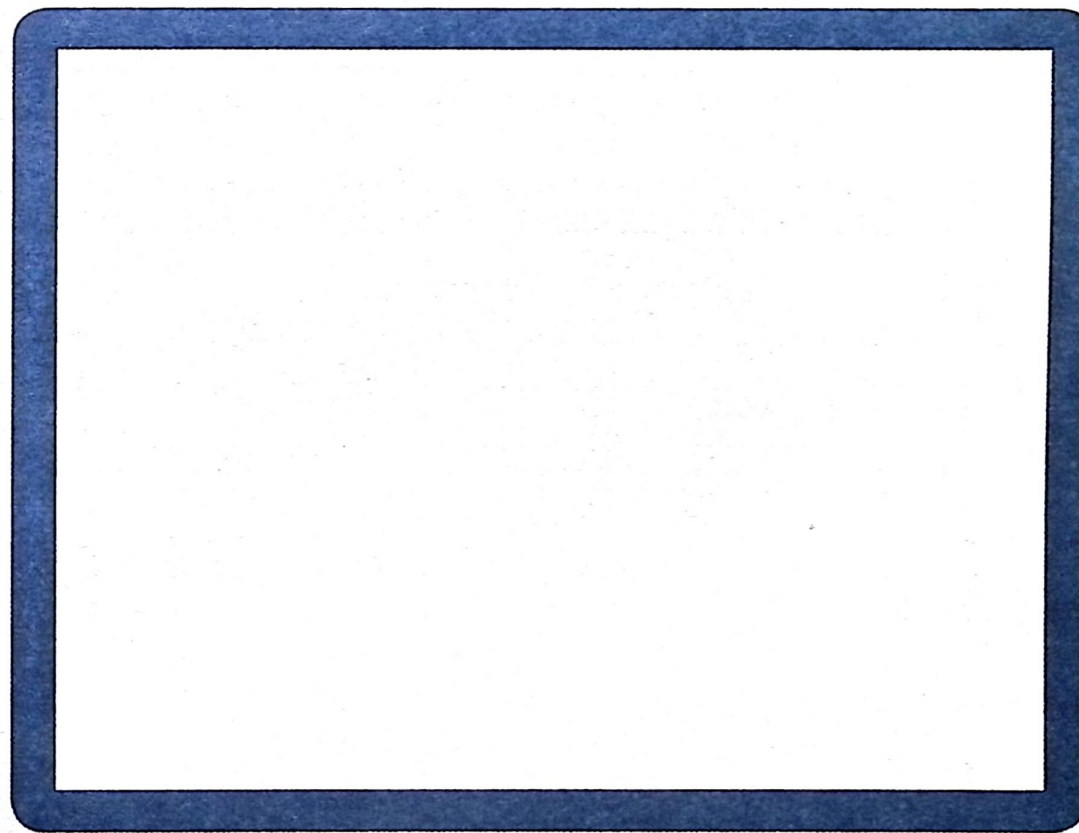
I can also look for patterns.

Name _____

Solve & Share

Use counters. Show $6 + 6 = 12$.

Then show and explain how knowing that fact can help you find $6 + 7$.

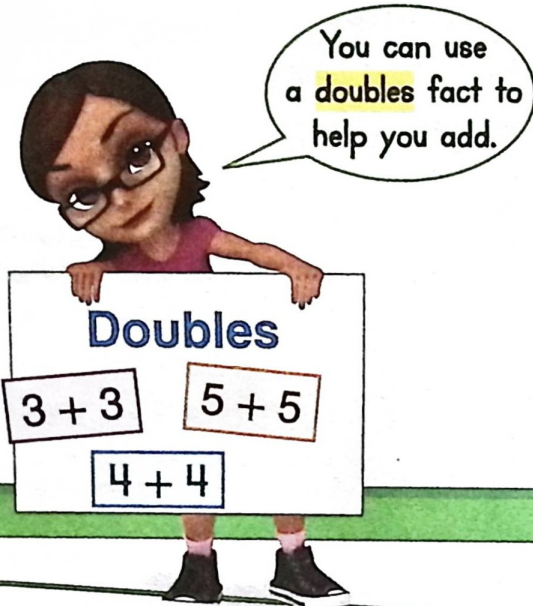


$$6 + 6 = 12$$

$$6 + 7 = \underline{\quad}$$

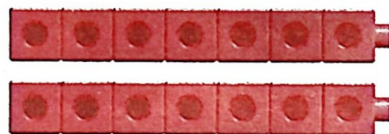


Find $7 + 8$ and find $7 + 9$.

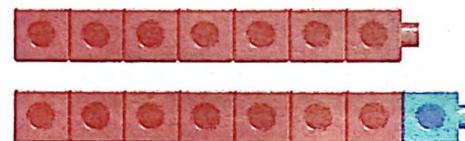


You can use the doubles fact to help find a **near doubles** fact.

Doubles Fact: $7 + 7 = 14$

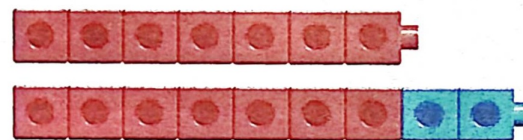


$7 + 8$ is 1 more than $7 + 7$.



$7 + 8 = 15$
and $7 + 9 = 16$.
These are near
doubles facts.

$7 + 9$ is 2 more than $7 + 7$.



Convince Me! How could you use the doubles fact $7 + 7$ to find $7 + 9$?

☆ **Guided Practice** ☆

Complete the doubles facts. Use the doubles facts to solve the near doubles. Use cubes if needed.

1. $2 + 2 = \underline{\quad 4 \quad}$

$2 + 3 = \underline{\quad}$

2. $\underline{\quad} = 4 + 4$

$\underline{\quad} = 4 + 5$

3.	3	3
	+ 3	+ 4

4.	5	5
	+ 5	+ 7

Name _____

Independent

Practice

Complete the doubles facts. Use the doubles facts to solve the near doubles. Use cubes if needed.

5. $6 + 6 =$ _____ $6 + 7 =$ _____ 6. $5 + 5 =$ _____ $5 + 6 =$ _____

7. $8 + 8 =$ _____ $8 + 10 =$ _____ 8. _____ $= 1 + 1$ _____ $= 1 + 3$

9. 2	2	10. 4	4
$+ 2$	$+ 3$	$+ 4$	$+ 5$

12. 3	3	13. 5	5
$+ 3$	$+ 5$	$+ 5$	$+ 7$

15. **Algebra** Complete. Then explain how you solved the problem.

$9 + \boxed{} = 18$ $\boxed{} + \boxed{} = 19$

Problem Solving ☆ Solve the problems below.

16. **Model** John drew 4 houses. Then he drew 5 more houses. How many houses did John draw in all?

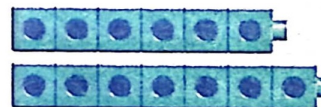
Draw a picture and write an equation to explain your thinking.

___  ___ = ___ houses

17. **Higher Order Thinking** Choose a doubles fact. Use that doubles fact to draw a picture that shows a near doubles story. Write the near doubles fact.



18. ☒ **Assessment Practice** Kate wants to find $6 + 7$.



Which doubles fact will help her the most?

- (A) $4 + 4 = 8$
- (B) $6 + 6 = 12$
- (C) $8 + 8 = 16$
- (D) $9 + 9 = 18$