

Name Answer Key

I

- a. Write all the numbers between 5 and 10.
- b. Write all the numbers between 25 and 30.
- c. Write all the letters between K and R.

**ANSWER:** a. 6, 7, 8, 9; b. 26, 27, 28, 29; c. L, M, N, O, P, Q

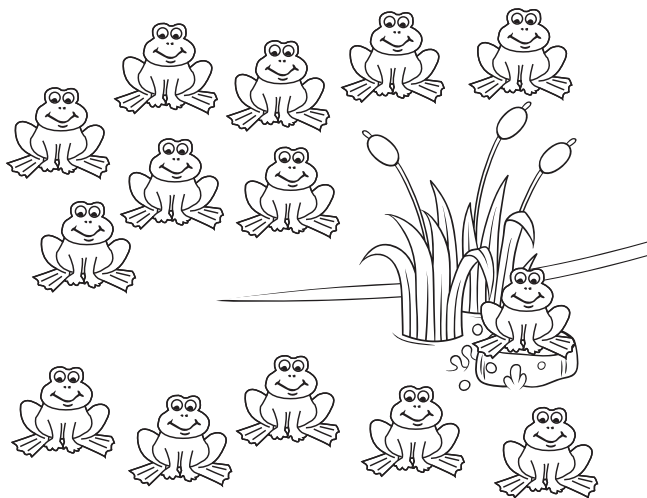
**COMMENTS & EXTENSIONS:** The ability to keep several things in mind is a basic skill that is underdeveloped in children.



How many numbers are between 35 and 40? [4: 36, 37, 38, 39] How many letters are between F and K? [4: G, H, I, J]

## Try This

6 frogs jumped into the pond and then 8 more followed. How many frogs are in the pond now?



Show the addition with your frog counters.

Solve.

$$6 + 8 = 14$$

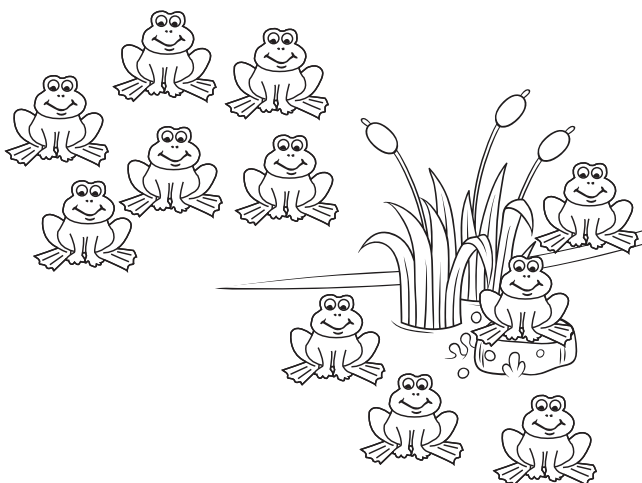
Show the addition another way.

Solve.

$$8 + 6 = 14$$

**Use counters. Act out the addition story.**  
**Complete to show both ways to add.**

1.



$$5 + 6 =$$

11

6

+

5

=

11

continued on the next page

2. A group of 9 frogs joined a group of 8 frogs.

$$9 + \underline{8} = \underline{17}$$

$$8 + \underline{9} = \underline{17}$$

3. Jordan put two groups together and found the sum:  $6 + 7 = 13$ .

Write another number sentence to add the same numbers in a different order.

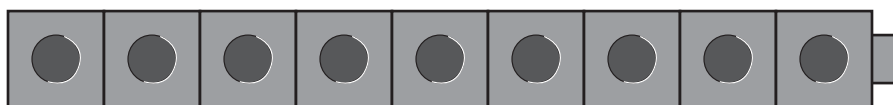
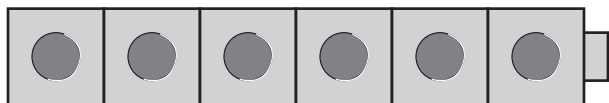
$$\underline{7} + \underline{6} = \underline{13}$$

4. If you know that  $7 + 8 = 15$ , what is another addition fact that you also know? Think about the addends.

$$\underline{8 + 7 = 15}$$

1. Ashley builds a train of 6 red cubes and 9 blue cubes. How many cubes in all?

Use Snap Cubes to build the model and add to solve the problem.



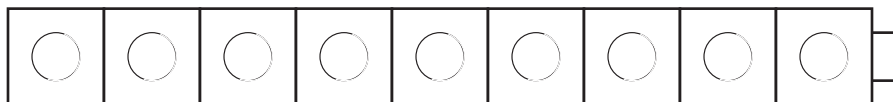
Combine the cubes. Turn the cube train around and add in any order.

$$6 + 9 = \underline{15}$$

$$9 + 6 = \underline{15}$$

2. Show 4 blue cubes and 5 red cubes. How many cubes are there in all?

Color to show how you add.



Answer key: color 4 cubes blue, 5 cubes red.

There are two ways to find the sum.

$$4 + 5 = \underline{9} \text{ is the same as } 5 + \underline{4} = \underline{9}$$

3. If you add together 7 red + 4 blue cubes, what is the sum?

$$7 + 4 = \underline{11}$$

Use the same addends. What addition fact do you also know?

$$\underline{4} + \underline{7} = \underline{11}$$




Name Answer Key

2

Draw the balloons.

John had 4 balloons.	Sue gave him 3 balloons.	How many balloons does John have now?

**ANSWER:**

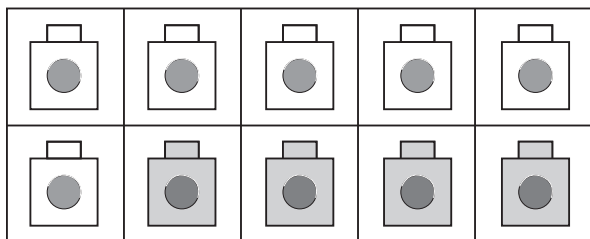
John	Sue	How Many
		

**COMMENTS & EXTENSIONS:** Challenge children to write their own word problems, exchange them, and solve them by drawing pictures.



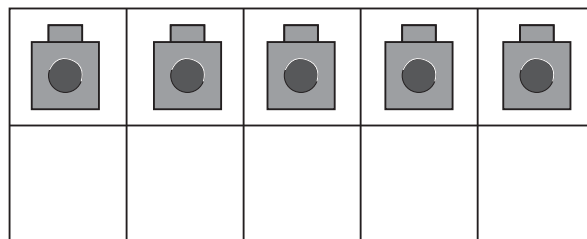
## Try This

$$5 + 6 + 4 =$$



$$6 + 4 = 10$$

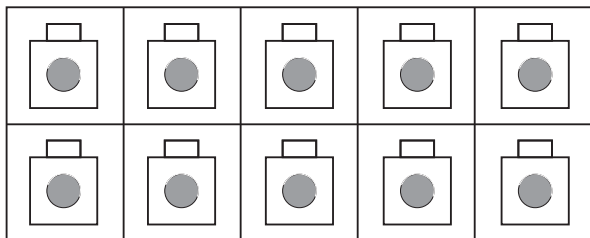
$$\text{So, } 5 + 6 + 4 = 15$$



$$10 + 5 = 15$$

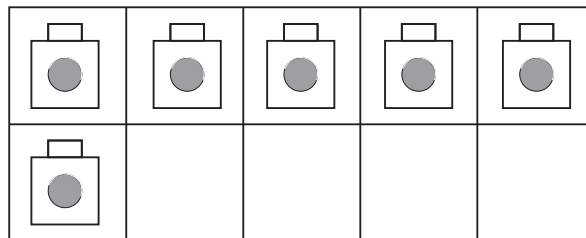
**Use Snap Cubes to model. Color cubes to match.  
Complete the number sentences to solve.**

1.  $7 + 6 + 3 =$  16



$$7 + 3 =$$
 10

Answers will vary.



$$10 + 6 =$$
 16

**Use Snap Cubes. Draw and color cubes in the ten frames. Solve.**

**2.**  $9 + 7 + 1 =$  17



Check children's drawings.

**Draw a model. Solve.**

**3.**  $3 + 5 + 5 =$  13

Check children's drawings.

**4.**  $4 + 7 + 2 =$  13

Check children's drawings.



## Solve.

1. Miley has 6 green cubes, 4 red cubes, and 7 blue cubes. Model and color the cubes.

○	○	○	○	○	○	○	○	○	○	
○	○	○	○	○	○	○	○	○	○	

Answers will vary.

$$6 + 4 + 7 = \underline{17}$$

$$10 + \underline{7} = \underline{17}$$

## Draw the cubes and solve.

2. Will shows 3 blue cubes, 2 red cubes, and 7 green cubes.

$$\underline{3} + \underline{2} + \underline{7} = \underline{12}$$

Answers will vary.

## Solve.

3. Hannah has 5 blue cubes, 5 red cubes, and 4 green cubes. How many cubes does she have in all?

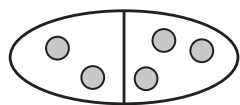
$$\underline{5} + \underline{5} + \underline{4} = \underline{14}$$

$$4. \quad 2 + 7 + 8 = \underline{17}$$

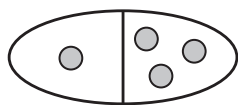
Name Answer Key

3

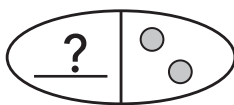
Here is a new way of showing numbers.  
Complete the figures.



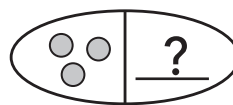
5



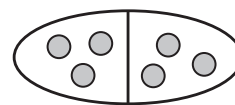
a.   ?  



b. 6

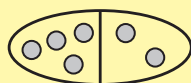


c. 8

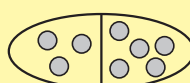


d.   ?  

**ANSWER:** a. 4; b.



c.



d. 6

**COMMENTS & EXTENSIONS:** These diagrams show the heart and soul of addition and subtraction: the composition of two classes to make a third.



Draw a different way to show numbers. Show  $4 + 5 = 9$  this way.

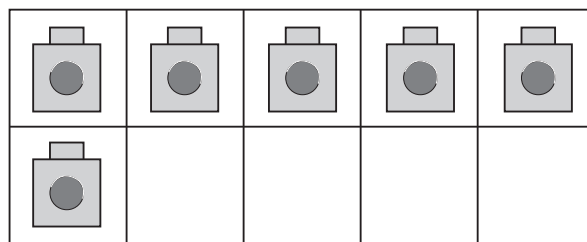
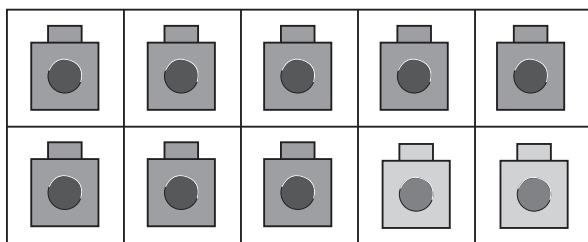
## Use a Double Ten Frame and Snap Cubes to model.

### Try This

16 muffins are needed for an order. You have 8 muffins. How many more muffins do you need?

Think of the related addition fact:  $8 + \underline{8} = 16$

Show with Snap Cubes on the double ten frame. Add.



$$8 + 8 = 16$$

Complete the number sentence:

$$16 - 8 = \underline{8}$$

8 muffins

## Use Snap Cubes. Solve.

- 13 loaves are needed for an order. You have 9 loaves. How many more loaves do you need?

Use the addition fact:  $9 + \underline{4} = 13$ .

Complete the number sentence:  $13 - 9 = \underline{4}$ .

4 loaves

- 2.** Inez wants to buy 14 bagels. You put 8 into a bag.  
How many more bagels do you need?

$$14 - 8 = \underline{6} \quad \underline{6} \text{ bagels}$$

- 3.** You have 8 rolls. Ms. Grant wants to buy 17 rolls.  
How many more rolls do you need?

Complete the fact family to help you solve.

$$8 + \underline{9} = 17$$

$$17 - 8 = \underline{9}$$

$$\underline{9} + 8 = 17$$

$$17 - \underline{9} = 8$$

How many more rolls do you need? 9 rolls

- 4.** A box holds 12 muffins. You put 4 muffins into  
the box. How many more muffins do you need  
to fill the box?

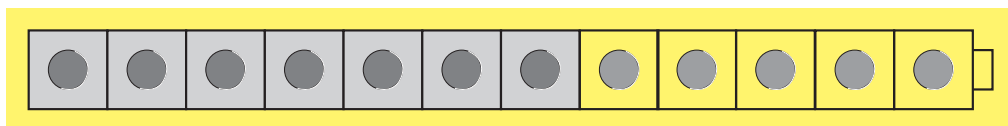
$$12 = 4 + \underline{8} \quad \underline{8} \text{ muffins}$$

Write another fact that helped you solve.

Answers will vary.

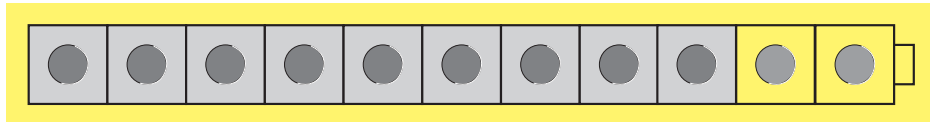
**Use Snap Cubes to model. Color the model and complete the equations.**

1. You need 12 cubes all together. You have 7. How many more cubes do you need to make 12 in all?



$$7 + \underline{5} = 12$$

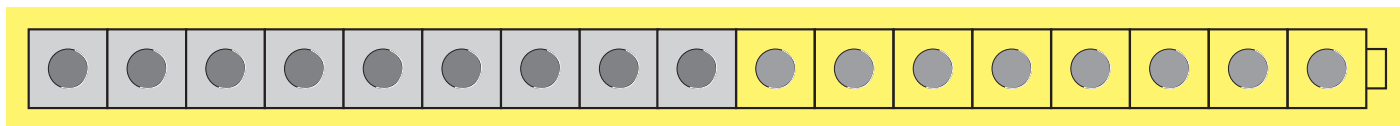
2. The customer orders 11 boxes. You have 9 boxes ready. How many more boxes do you need?



$$9 + \underline{2} = 11$$

$$11 - 9 = \underline{2}$$

3. Rob needs 17 boxes to complete the order. He has 9 boxes. How many more boxes does Ron need?



$$17 - 9 = \underline{8}$$

$$9 + \underline{8} = 17$$

4. You have 8 boxes. Mr. Jones asks you for 13 boxes. Draw a picture to show how many more boxes you need.

Check children's drawings.

$$8 + \underline{5} = 13$$

$$13 - 8 = \underline{5}$$

Name Answer Key

4

Look at the colors of shirts in your class.  
Count how many of each color. Use tallies.

**ANSWER:** Sample:

Blue	
Red	
White	
Multi colored	<del>    </del>

**COMMENTS & EXTENSIONS:** What is the most common color? The least common? What colors do not occur at all? How do students decide to tally multi colored shirts?

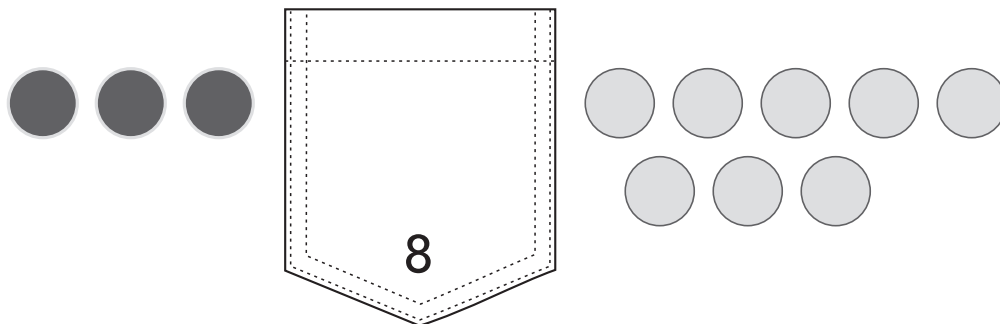


Find someone who used a different way to name all the colors. What did that person do differently?



## Try This

Count on to add  $3 + 8$ . Start with the larger number. Put it in your pocket, then count on.

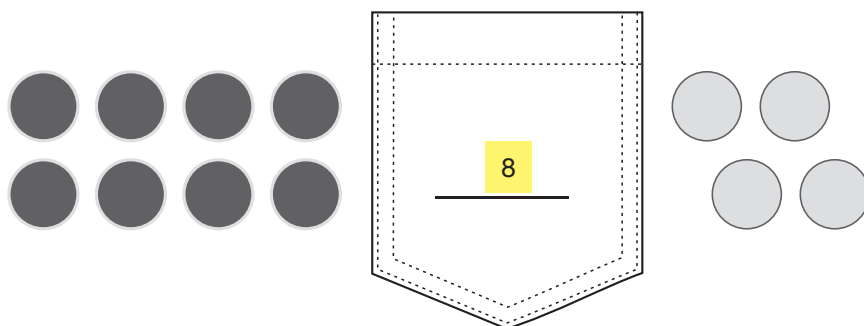


Count on:  $8 + 3 =$  11

Count back:  $11 - 3 =$  8

**Use Two-Color Counters and a Number Line to add and subtract. Write the larger number in your pocket. Count on or count back.**

1.

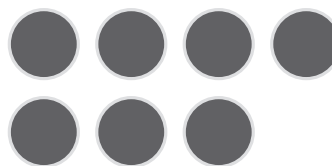
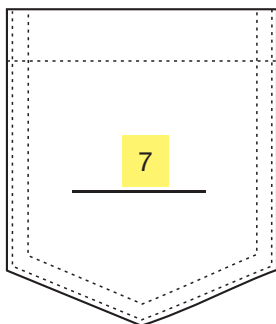
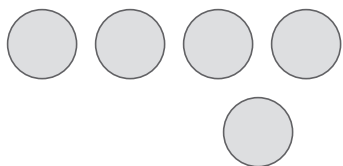


$$8 + 4 = \underline{12}$$

$$12 - 4 = \underline{8}$$



2.

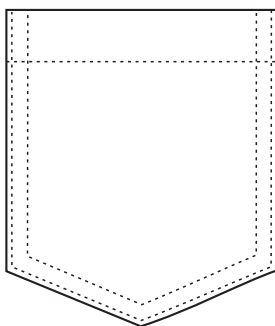


$$7 + 5 = \underline{12}$$

$$12 - 5 = \underline{7}$$

**Draw counters to model. Solve.**

3. Count on to add  $9 + 4$ .



Answers will vary.

$$9 + 4 = \underline{13}$$

**Solve.**

$$4. \textcircled{5} + 3 = \underline{8}$$

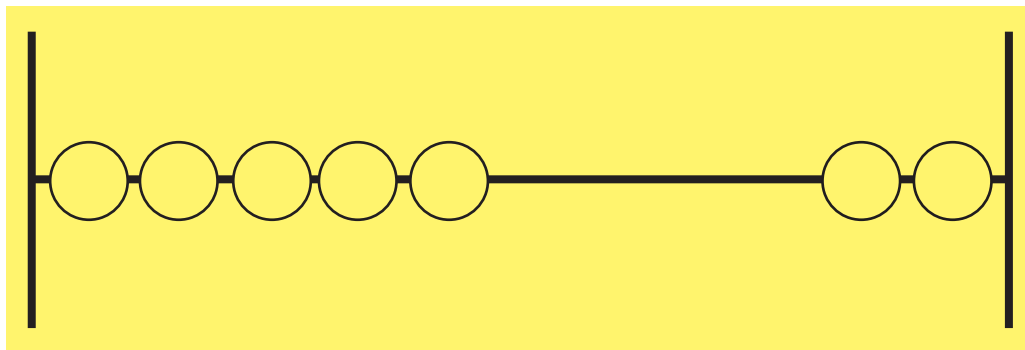
$$8 - \underline{3} = \underline{5}$$

$$5. 5 + \textcircled{9} = \underline{14}$$

$$14 - \underline{5} = \underline{9}$$

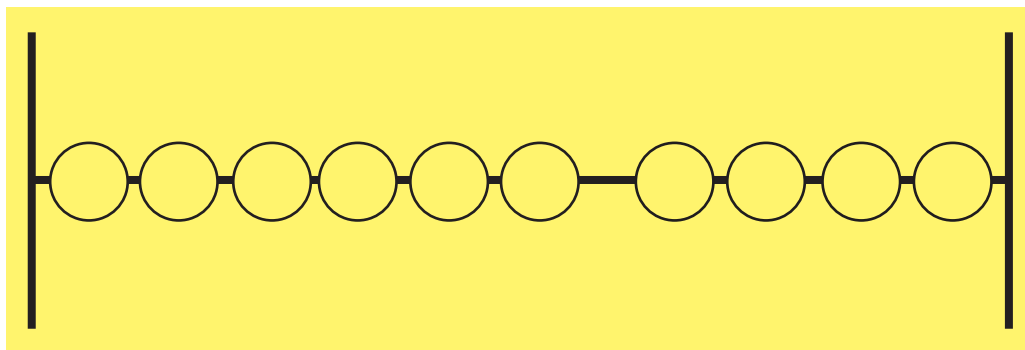
**Use a Rekenrek to build the model. Draw your model and write the sum.**

**1. Count on:  $5 + 2$ .**



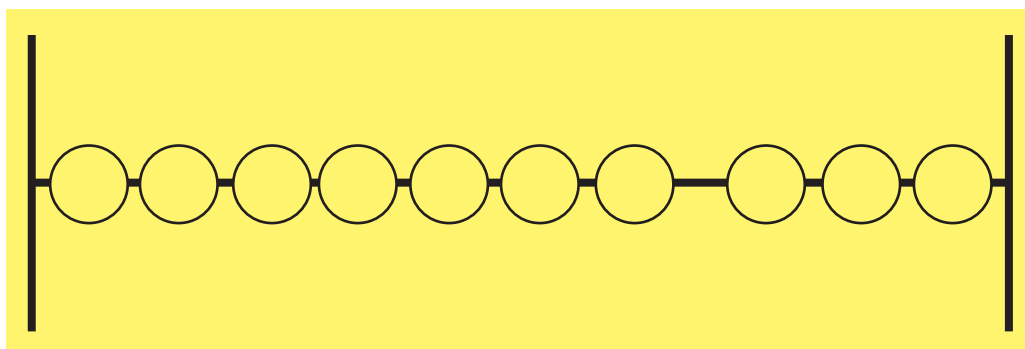
$$5 + 2 = \underline{7}$$

**2. Count on:  $6 + 4$ .**



$$6 + 4 = \underline{10}$$

**3. Count on:  $7 + 3$ .**



$$7 + 3 = \underline{10}$$

**Count on and count back to solve.**

4.  $3 + 9 =$  12

$12 - 3 =$  9

5.  $7 + 6 =$  13

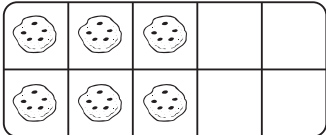
$13 - 6 =$  7


Name Answer Key

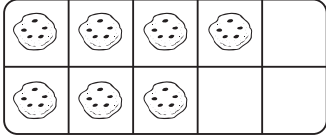
5

How many empty places are there in each muffin tin?  
How many muffins in each?

Write a number sentence for each.

a. 

b. 

c. 

**ANSWER:** a. Sample: 4 places, 6 muffins,  $10 - 6 = 4$

b. Sample: 8 places, 2 muffins,  $8 + 2 = 10$

c. Sample: 3 places, 7 muffins,  $10 - 3 = 7$

**COMMENTS & EXTENSIONS:** Here children go from pictorial representations to written number sentences. Now turn the tables with the oral question below.

Draw muffin tin pictures showing  $8 - 5 = 3$ ,  $6 + 4 = 10$ , and  $5 + 5 = 10$ .

## Try This

8 teachers were in the lunch room. Then 3 more teachers joined them. How many teachers are in the lunch room now?

- Use Snap Cubes to model the problem.

- Make a 10.

What if 3 teachers leave?  
How many will be left?

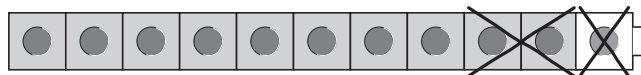
$$8 + 3 \rightarrow 8 + 2 + 1$$

$$10 + 1 = 11$$



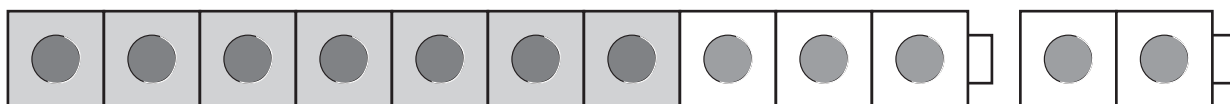
$$11 - 3 \rightarrow 11 - 1 - 2$$

$$10 - 2 = 8$$

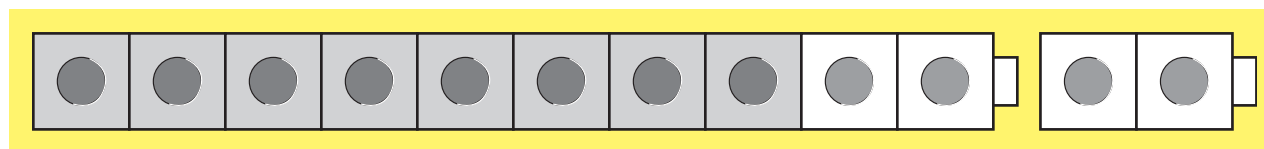


**Use Snap Cubes to model making a 10 to solve. Draw or color your model. Complete the number sentence.**

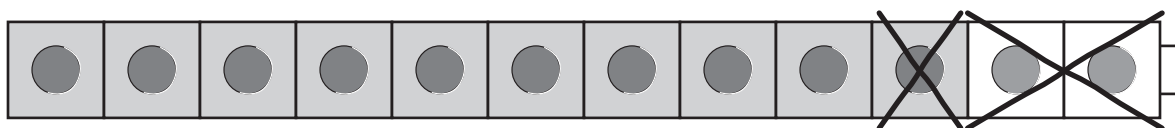
1.  $7 + 5$     7 + 3 + 2 = 12



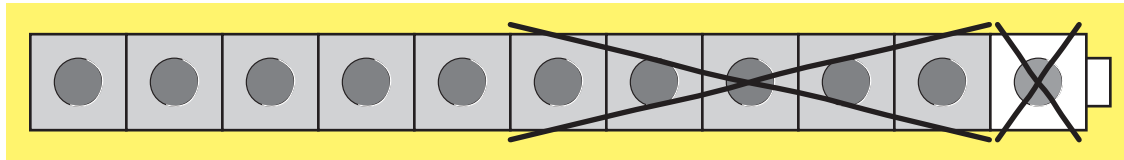
2.  $8 + 4$     8 + 2 + 2 = 12



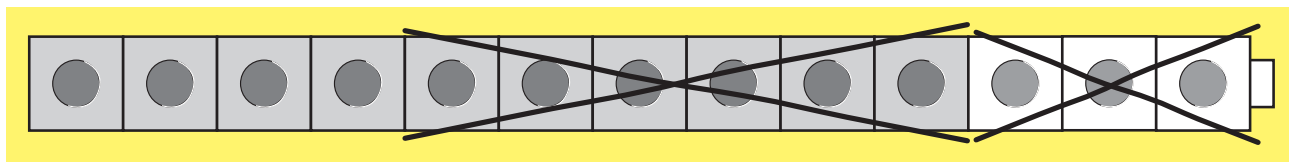
3.  $12 - 3$     12 - 2 - 1 = 9



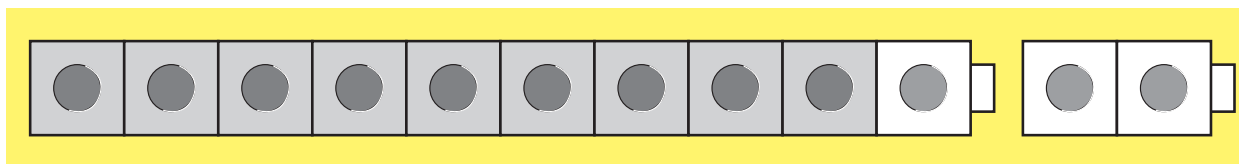
4.  $11 - 6$    11 - 1 - 5 = 5



5.  $13 - 9$    13 - 3 - 6 = 4



6.  $9 + 3$    9 + 1 + 2 = 12



**Add or subtract. Make a 10 first.**

7.  $8 + 7 = ?$

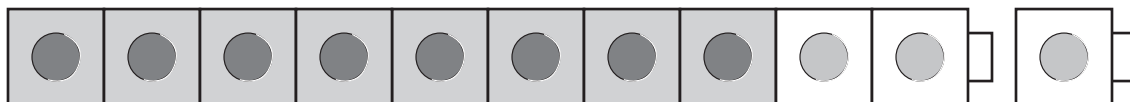
$8 +$  2  $+$  5  $=$  15

8.  $14 - 5 = ?$

$14 -$  4  $-$  1  $=$  9

**Use Snap Cubes. Build the cube train. Complete the number sentences.**

1. You see 8 ducks. Then you see 3 more. How many ducks in all?



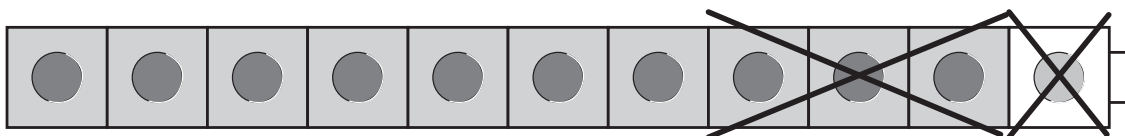
$$8 + 3 = ?$$

Think  $8 + 2 + 1$  because  $2 + 1 = 3$

Think  $10 + 1$  because  $8 + 2 = 10$

$$10 + 1 = \underline{11}$$

2. You had 11 crayons. Then you lost 4. How many crayons now?



$$11 - 4 = ?$$

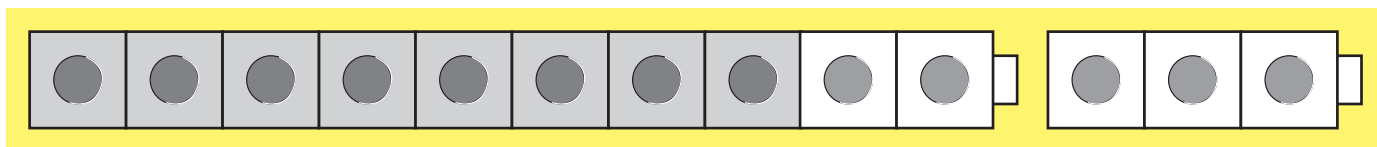
Think  $11 - 1 = 10$

Then take away 3 more.

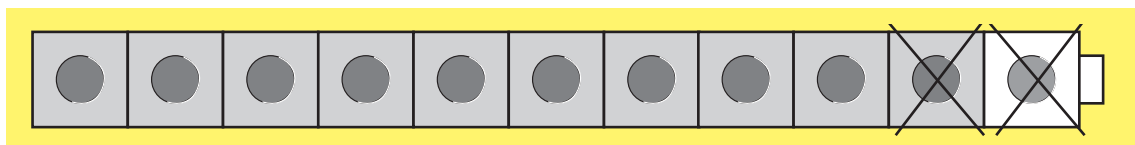
$$10 - 3 = \underline{7}$$

**Use Snap Cubes to model the problem.  
Draw your model. Make a 10 to solve.**

3.  $8 + 5 = ?$      8 + 2 + 3 = 13



4.  $11 - 2 = ?$      11 - 1 - 1 = 9



**Add or subtract. Make a 10 first.**

5.  $9 + 5 = ?$

6.  $13 - 6 = ?$

$9 + \underline{1} + \underline{4} = \underline{14}$

$13 - \underline{3} - \underline{3} = \underline{7}$



Name Answer Key

6

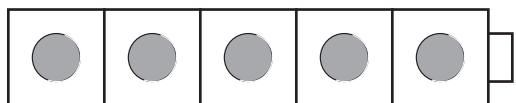
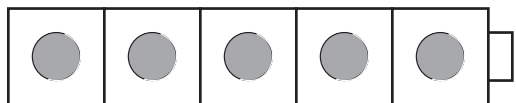
- a. Alexis knows that 4 plus 4 is 8. How can she figure out 4 plus 5?
- b. Jose knows that 4 plus 5 is 9. How can he figure out 14 plus 15?

**ANSWER:** a. Sample: 5 is 1 more than 4, so 4 plus 5 is one more than 4 plus 4, so 4 plus 5 is 9; b. Sample: 14 and 15 are each 10 more than 4 and 5, so 14 plus 15 is 20 more than 4 plus 5, so 14 plus 15 is 29.

**COMMENTS & EXTENSIONS:** In mathematics, information is almost always related to other information and can often be derived from other information.



## Try This



$$5 + 5 = 10$$

double

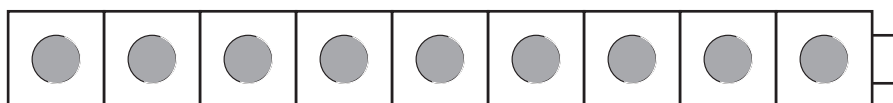
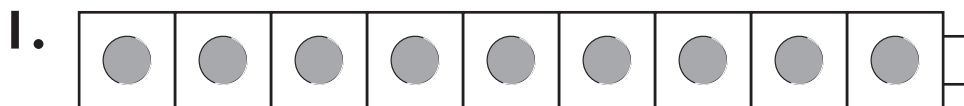
$$5 + 6 = 11$$

double plus 1

$$10 - 5 = 5$$

related  
subtraction

**Use Snap Cubes to model. Complete the number sentences.**



$$9 + 9 = \underline{18}$$

double

$$9 + 10 = \underline{19}$$

double plus 1

$$18 - 9 = \underline{9}$$

related subtraction

2.  $8 + 8 = \underline{16}$

$8 + 9 = \underline{17}$

$\underline{16} - 8 = \underline{8}$

**Solve. Find the doubles fact that helps you add.**

3.  $9 + 8 =$  17      \_\_\_\_\_  $+$  \_\_\_\_\_  $=$  \_\_\_\_\_

Answers will vary.

$7 + 6 =$  13      \_\_\_\_\_  $+$  \_\_\_\_\_  $=$  \_\_\_\_\_

$8 + 7 =$  15      \_\_\_\_\_  $+$  \_\_\_\_\_  $=$  \_\_\_\_\_

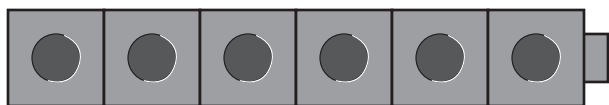
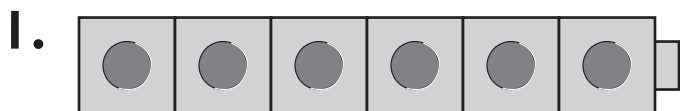
**Write other facts that this doubles fact helps you solve.**

4.  $7 + 7 =$  14      \_\_\_\_\_  $+$  \_\_\_\_\_  $=$  \_\_\_\_\_

Answers will vary.

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

**Use Snap Cubes to model. Write the sum.**



$$6 + 6 = \underline{12}$$

**Use Snap Cubes to model. Draw a picture to show how you add or subtract. Complete the number sentences.**

$$2. \ 6 + 7 = \underline{13}$$

Answers will vary.

$$3. \ 12 - 6 = \underline{6}$$

Answers will vary.

**Solve.**

$$4. \ 7 + 6 = \underline{13}$$

$$13 - 6 = \underline{7}$$