

Name _____

Subtraction Facts to 20

Review What You Know

Write a subtraction sentence to answer the question.

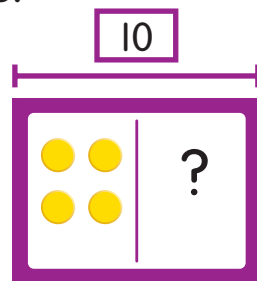
- There are 12 rabbits.
8 hop away.
How many rabbits are left?

$$\underline{\quad} - \underline{\quad} = \underline{\quad}$$

Write the missing numbers.

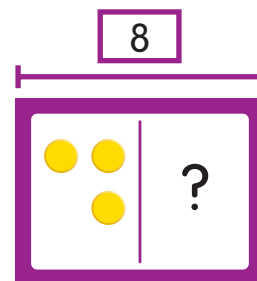
2.

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



3.

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



Home-School Connection

Dear Family,

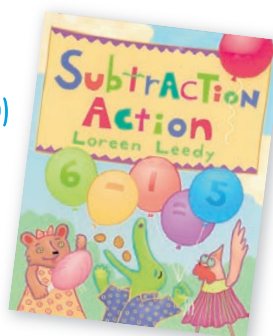
Today my class started Topic 15, **Subtraction Facts to 20**. I will learn different ways to subtract from numbers as high as 20. Here are some of the new math words I will be learning and some things we can do to help me with my math.

Love,

Book to Read

Reading math stories reinforces concepts. Look for this title in your local library:

Subtraction Action
by Loreen Leedy
(Holiday House, 2000)



Home Activity

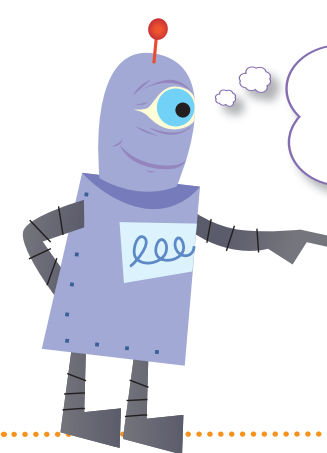
Have your child use pennies or other small objects to show $8 + 5 = 13$. Work together to write a related subtraction fact.



My New Math Words

related facts

addition facts and subtraction facts that have the same numbers



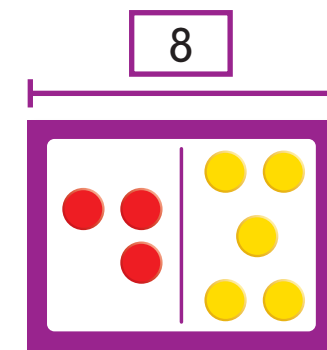
These facts are related.

$$2 + 3 = 5$$

$$5 - 2 = 3$$

fact family

a group of related addition and subtraction facts



$$3 + 5 = 8$$

$$5 + 3 = 8$$

$$8 - 3 = 5$$

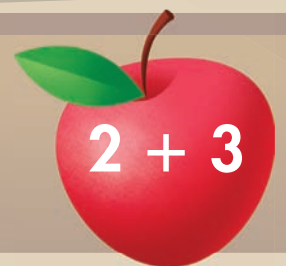
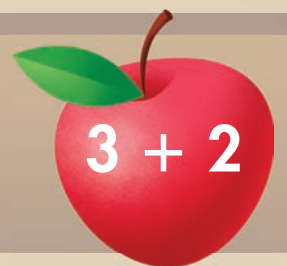
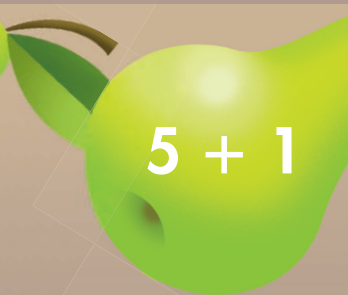
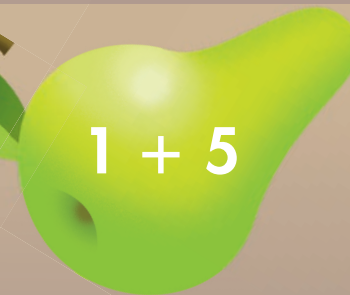
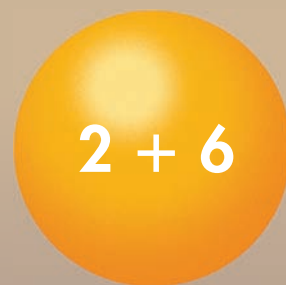
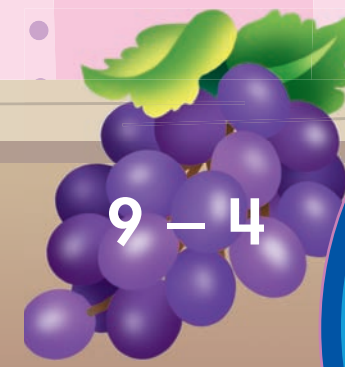
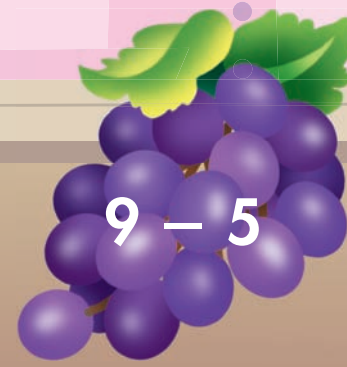
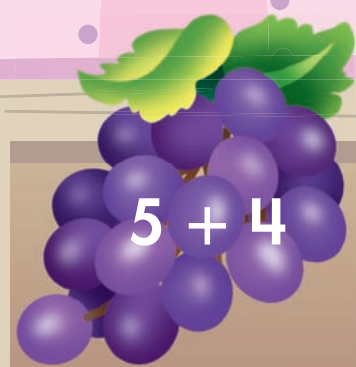
$$8 - 5 = 3$$

Fruity Facts

Number of players: 2

How to Play

1. Take turns. Spin the spinner.
2. Find the fact that equals the number you spun.
3. Cover the fruit fact with a game marker.
4. If there is no fruit fact that equals your number, spin again. Play until all of the fruit is covered.



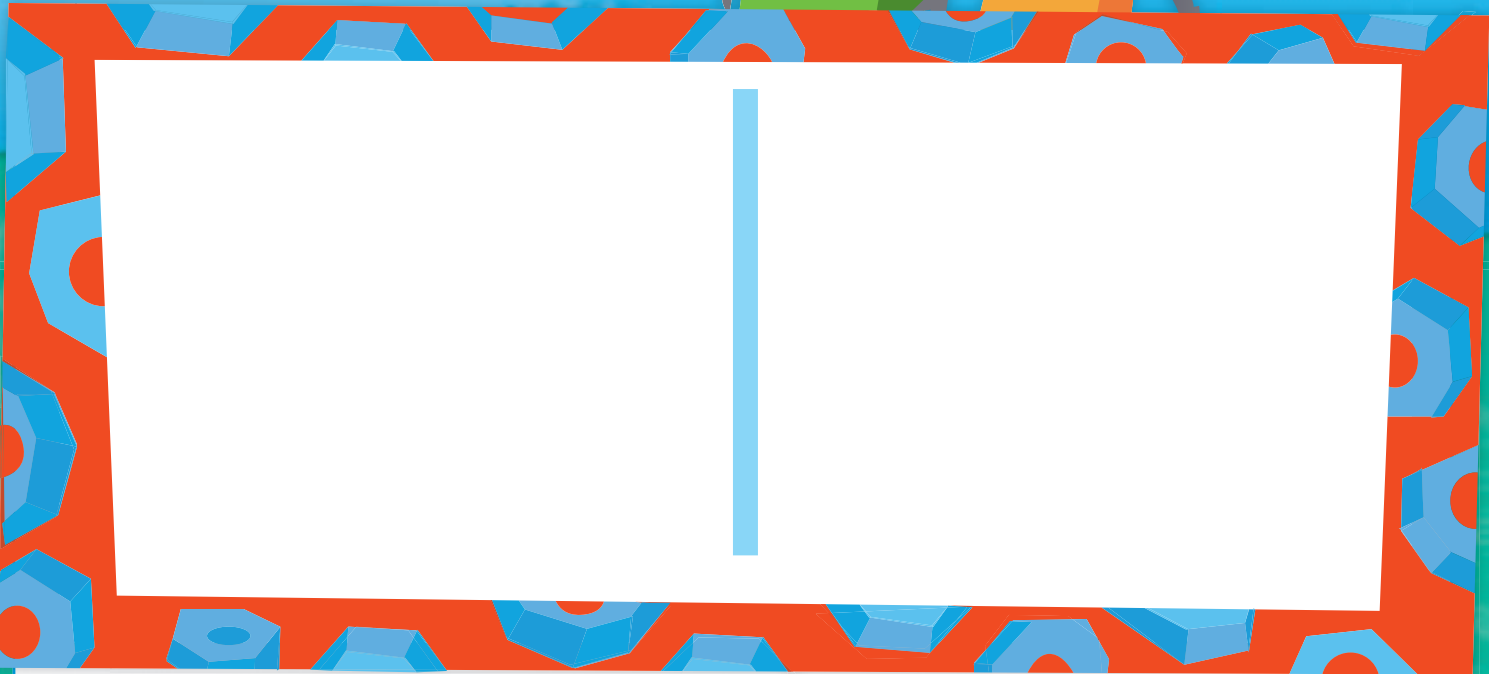
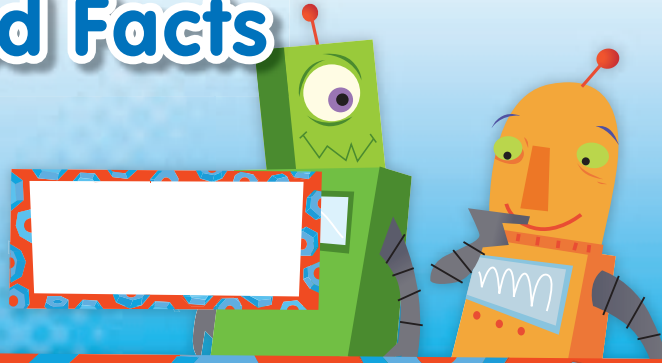
What You Need

- 20 counters
- 1 paper clip
- 1 pencil



Name _____

Using Related Facts



$_____ + _____ = _____$

$_____ + _____ = _____$

$_____ - _____ = _____$

$_____ - _____ = _____$

$_____ + _____ = _____$

$_____ + _____ = _____$

$_____ - _____ = _____$

$_____ - _____ = _____$

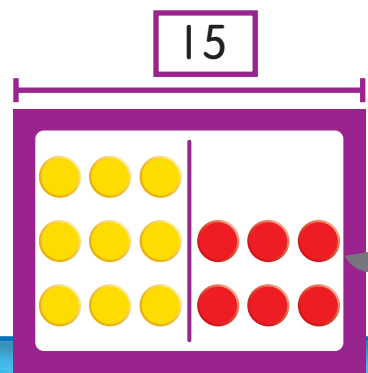


Home Connection Your child wrote a related subtraction sentence for each addition sentence.

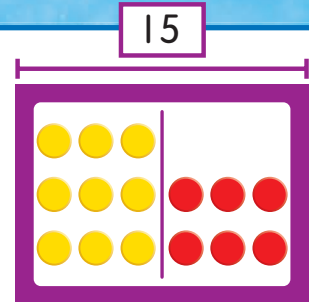
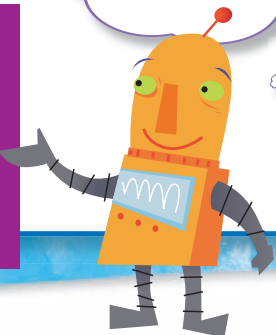
Home Activity Look for items in a group (up to 20). Have your child break the whole group into two parts and say the addition fact for the two parts and the whole (such as $9 + 4 = 13$). Then ask your child to say a related subtraction fact (such as $13 - 9 = 4$ or $13 - 4 = 9$).

NS 2.1 Know the addition facts (sums to 20) and the corresponding subtraction facts and commit them to memory. Also **NS 2.2** .

This model shows both addition and subtraction.

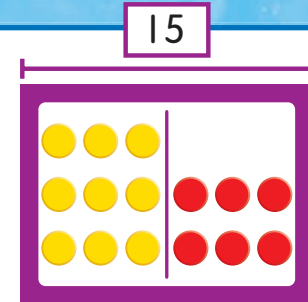


The whole is 15. The parts are 9 and 6.



$$9 + 6 = 15$$

If you add the parts, you get the whole.



$$15 - 6 = 9$$

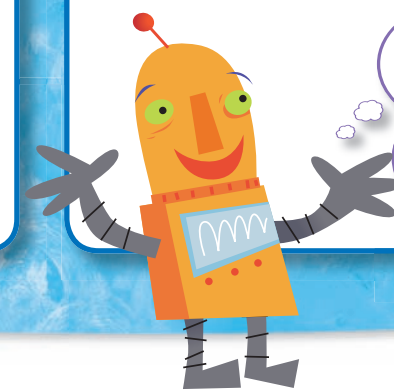
If you subtract one part from the whole, you get the other part.



These are **related facts**.

$$9 + 6 = 15$$

$$15 - 6 = 9$$

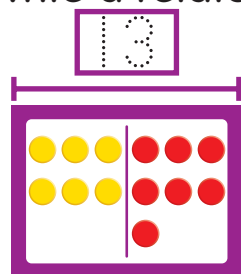


These facts have the same whole and the same parts.

Guided Practice

Add. Write the whole in the model. Then write a related subtraction fact.

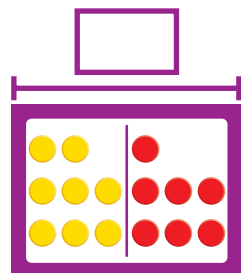
1.



$$6 + 7 = 13$$

$$13 - 7 = 6$$

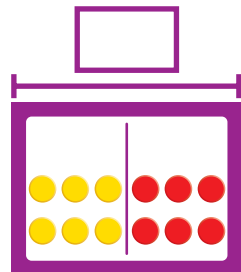
2.



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

$$\underline{\quad} - \underline{\quad} = \underline{\quad}$$

3.



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

$$\underline{\quad} - \underline{\quad} = \underline{\quad}$$

Do you understand? How are these facts alike? How are they different?

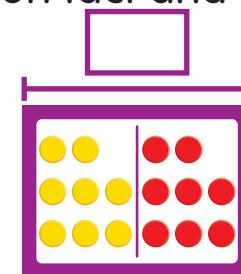
$$8 + 9 = 17$$

$$17 - 9 = 8$$

Independent Practice

Write the whole in the model. Then write an addition fact and a related subtraction fact.

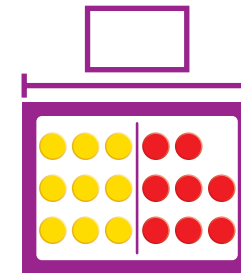
4.



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

$$\underline{\quad} - \underline{\quad} = \underline{\quad}$$

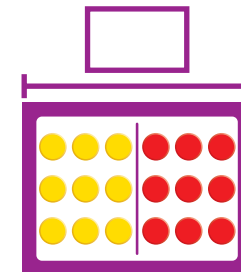
5.



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

$$\underline{\quad} - \underline{\quad} = \underline{\quad}$$

6.



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

$$\underline{\quad} - \underline{\quad} = \underline{\quad}$$

Number Sense Write a related subtraction fact for the addition fact below.

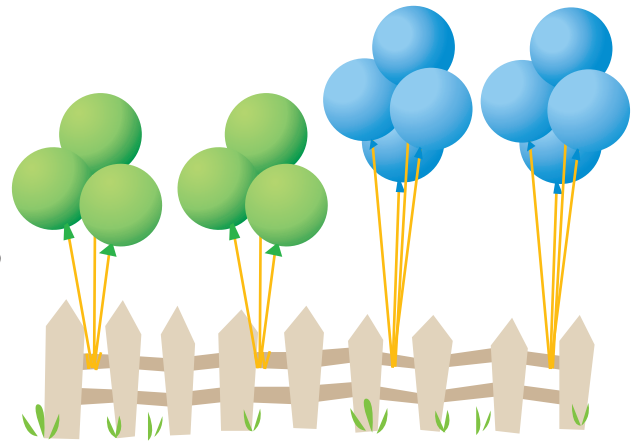
7. $10 + 10 = 20$ $\underline{\quad} - \underline{\quad} = \underline{\quad}$

Word Bank
related facts

Problem Solving

Solve the problems below.

8. There are 6 green balloons and 8 blue balloons tied to a fence. How many balloons are there in all? 6 balloons become loose and fly away. How many balloons are left?

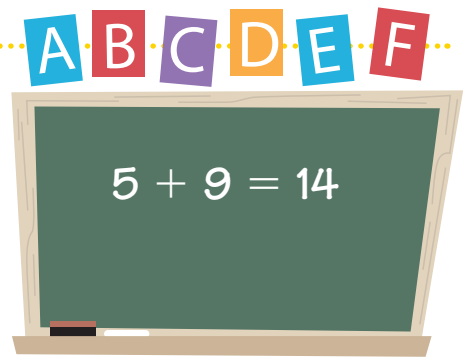


Write an addition sentence and a subtraction sentence to answer the questions.

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

$$\underline{\quad} - \underline{\quad} = \underline{\quad}$$

9. Shawn's teacher wrote this addition sentence on the board:




What subtraction sentence is related?

$$9 - 4 = 5$$

$$14 - 9 = 5$$

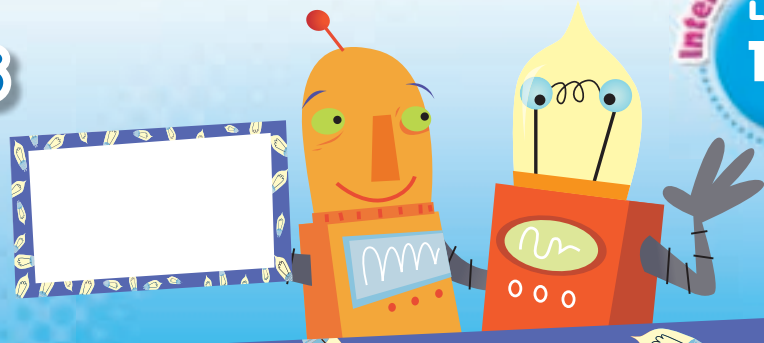
$$14 - 7 = 7$$

$$9 - 5 = 4$$

10.  **Journal** Draw a picture to show an addition fact. Then write a related subtraction fact.

Name _____

Fact Families

A large white rectangular area for writing, framed by a blue border with a repeating pattern of lightbulb icons. A vertical blue line is drawn down the center of the area.

1.

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

2.

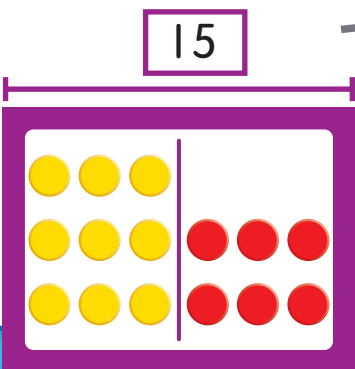
$$\underline{\quad} + \underline{\quad} = \underline{\quad}$$
$$\underline{\quad} + \underline{\quad} = \underline{\quad}$$
$$\underline{\quad} - \underline{\quad} = \underline{\quad}$$
$$\underline{\quad} - \underline{\quad} = \underline{\quad}$$


Home Connection Knowing two parts and a whole, your child wrote four related number sentences.

Home Activity Collect 13 small items. Have your child separate the group into two parts and say an addition fact that matches (such as $9 + 4 = 13$). Then ask him or her to say another addition fact and two subtraction facts using the same numbers.

NS 2.1 Know the addition facts (sums to 20) and the corresponding subtraction facts and commit them to memory. Also **NS 2.2** .

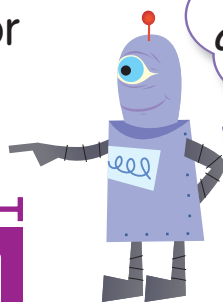
You can write two addition facts for this model.



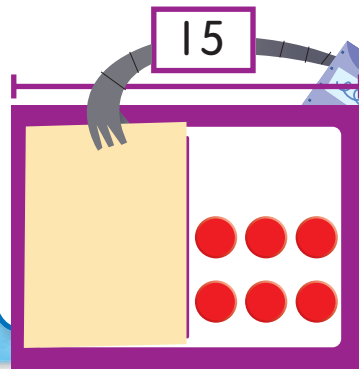
$$9 + 6 = 15$$

$$6 + 9 = 15$$

Add the parts in any order.

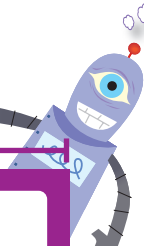


You can also write two subtraction facts.

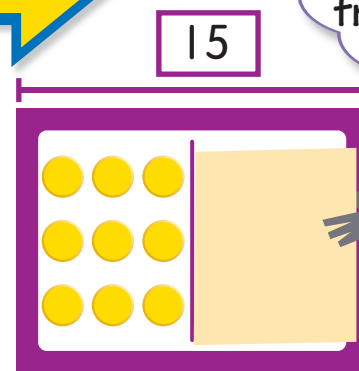


$$15 - 6 = 9$$

Subtract one part from the whole.



Subtract the other part from the whole.



$$15 - 9 = 6$$

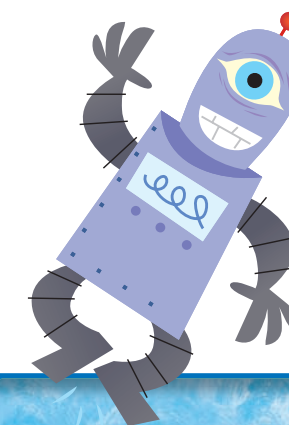
These facts are related. They are a **fact family**.

$$9 + 6 = 15$$

$$6 + 9 = 15$$

$$15 - 6 = 9$$

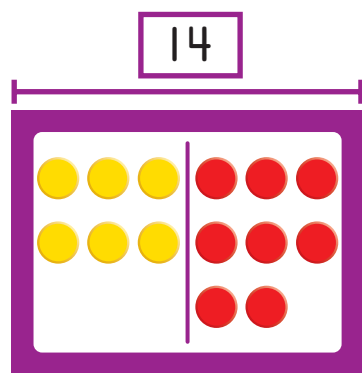
$$15 - 9 = 6$$



Guided Practice

Write the fact family for the model. Use counters to help.

1.

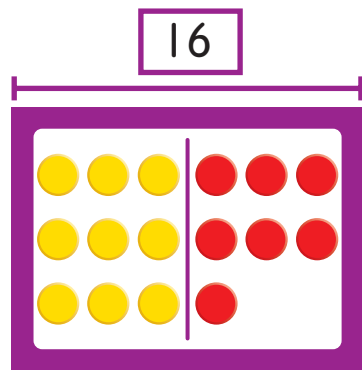


$$\frac{14}{14} = \frac{6}{8} + \frac{8}{6}$$

$$\frac{8}{8} = \frac{14}{6} - \frac{6}{8}$$

$$\frac{6}{6} = \frac{14}{8} - \frac{8}{6}$$

2.



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

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

$$\underline{\quad} = \underline{\quad} - \underline{\quad}$$

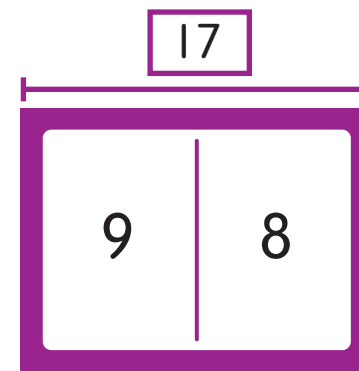
$$\underline{\quad} = \underline{\quad} - \underline{\quad}$$

Do you understand? Can $9 = 15 - 6$ be written as $15 - 6 = 9$? Explain.

Independent Practice

Write the fact family for the model.

3.



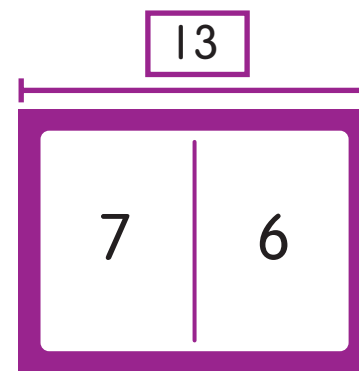
$$\underline{\quad} = \underline{\quad} + \underline{\quad}$$

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

$$\underline{\quad} = \underline{\quad} - \underline{\quad}$$

$$\underline{\quad} = \underline{\quad} - \underline{\quad}$$

4.



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

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

$$\underline{\quad} = \underline{\quad} - \underline{\quad}$$

$$\underline{\quad} = \underline{\quad} - \underline{\quad}$$

Algebra Write the missing numbers for this fact family.

$$5. \quad 9 + \underline{\quad} = 14 \quad \underline{\quad} - 5 = 9$$

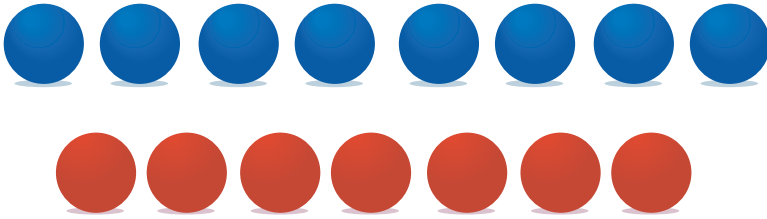
$$5 + 9 = \underline{\quad} \quad 14 - \underline{\quad} = 5$$

Word Bank
fact family

Problem Solving

Solve the problems below.

6. Write a fact family for the picture.



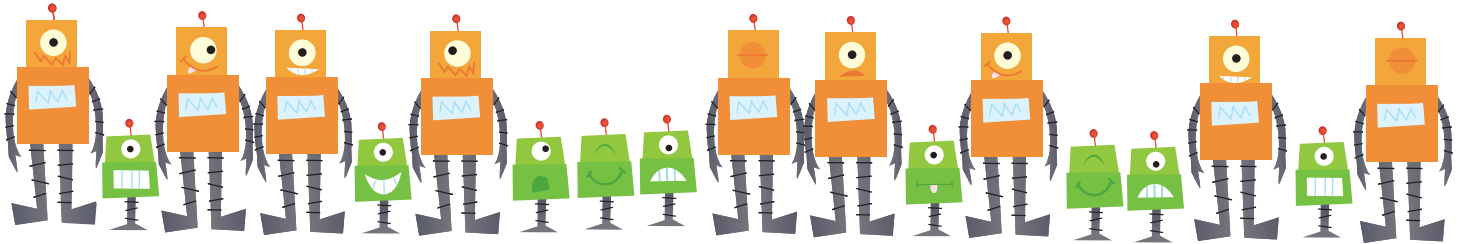
$$\underline{\quad} = \underline{\quad} + \underline{\quad}$$

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

$$\underline{\quad} = \underline{\quad} - \underline{\quad}$$

$$\underline{\quad} = \underline{\quad} - \underline{\quad}$$

7. Which fact family describes this picture?



$$9 = 9 + 0$$

$$0 = 9 - 9$$

$$11 = 9 + 2$$


$$2 = 11 - 9$$

$$18 = 9 + 9$$

$$9 = 18 - 9$$

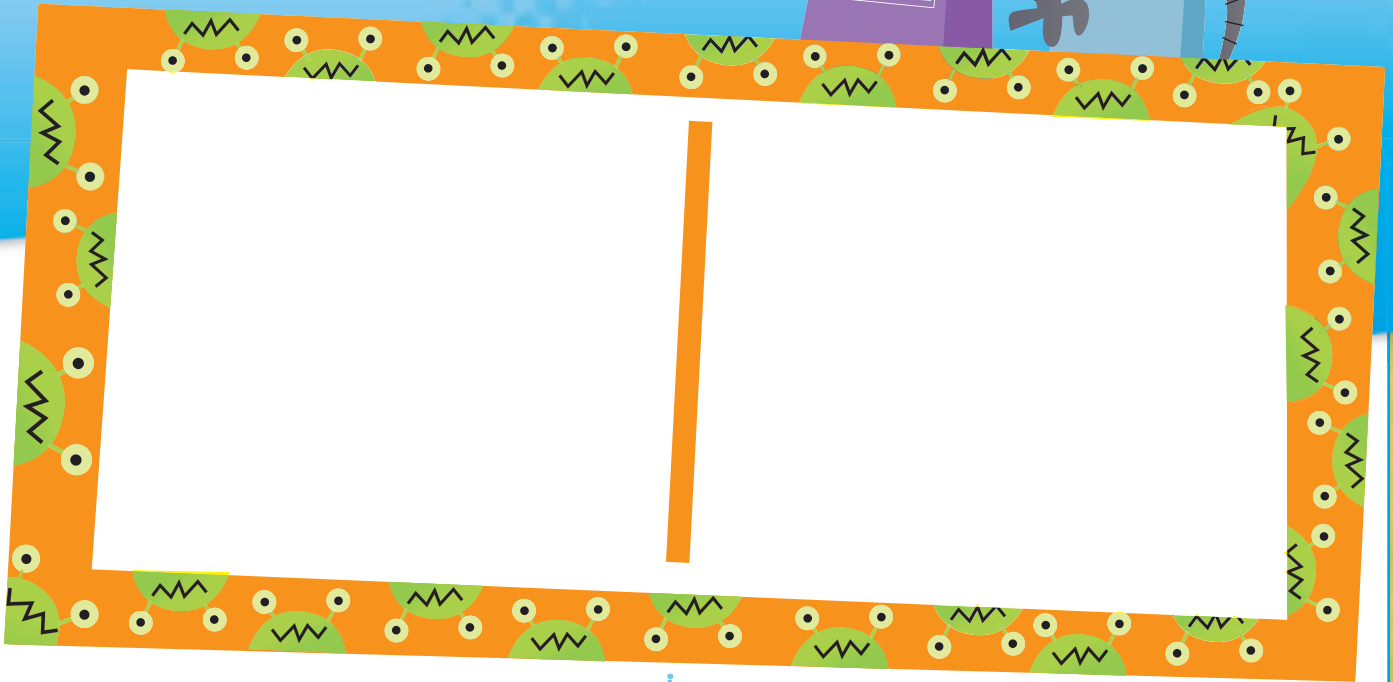
$$17 = 9 + 8$$

$$8 = 17 - 9$$

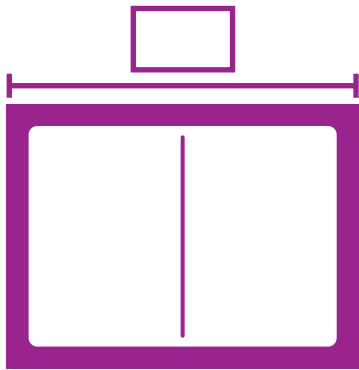
8.  **Journal** Write an addition fact that you know. Then write the whole fact family for it.

Name _____

Using Addition to Subtract

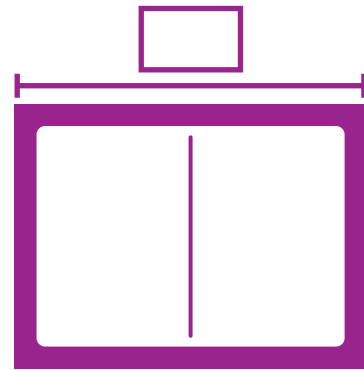


1.



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

2.



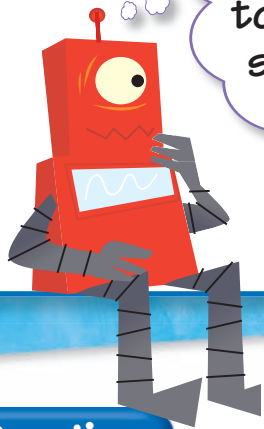
$$\underline{\quad\quad} - \underline{\quad\quad} = \underline{\quad\quad}$$
$$\underline{\quad\quad} + \underline{\quad\quad} = \underline{\quad\quad}$$



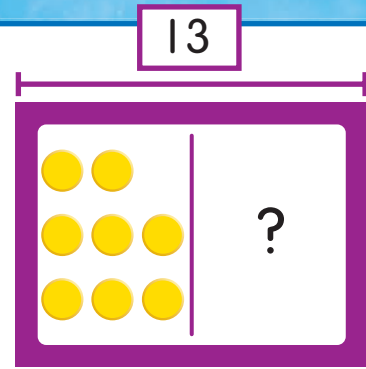
Home Connection Your child used counters to solve subtraction problems and write related addition sentences.
Home Activity Ask your child to explain how one of the models on the page shows the subtraction and addition problem underneath it.

NS 2.1 Know the addition facts (sums to 20) and the corresponding subtraction facts and commit them to memory. Also **NS 2.2** .

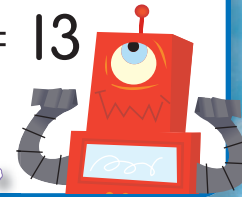
$$13 - 8 = ?$$



Use addition to help you subtract.



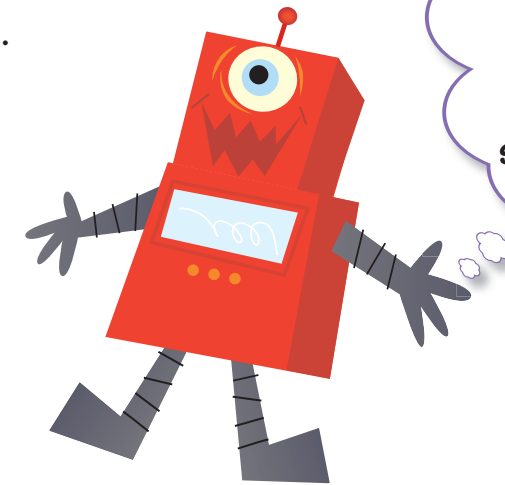
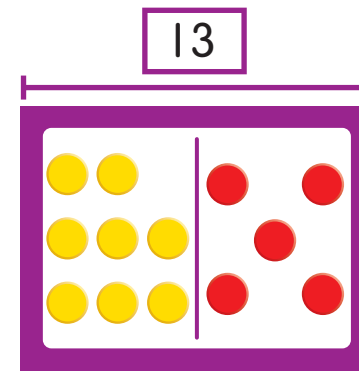
$$8 + ? = 13$$



What can I add to 8 to make 13?



Model the addition fact.

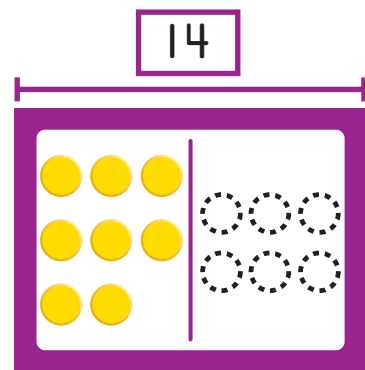


The missing part is 5.
 $8 + 5 = 13$,
 so $13 - 8 = 5$.

Guided Practice

Complete the model. Then complete the number sentences. Use counters to help.

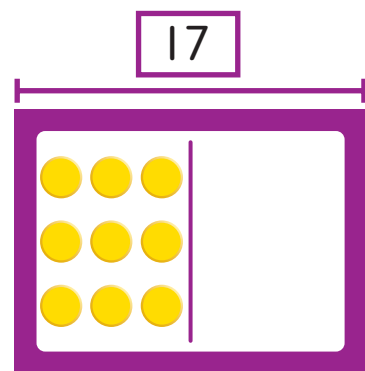
1.



$$14 - 8 = \underline{6}$$

$$8 + \underline{6} = 14$$

2.



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

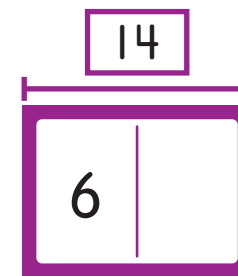
$$9 + \underline{\quad} = 17$$

Do you understand? How could you use addition to solve $16 - 9$?

Independent Practice

Complete the model. Then complete the number sentences.

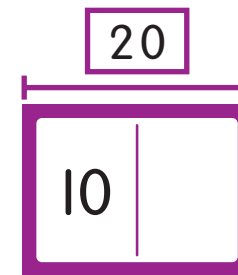
3.



$$14 - 6 = \underline{\quad}$$

$$6 + \underline{\quad} = 14$$

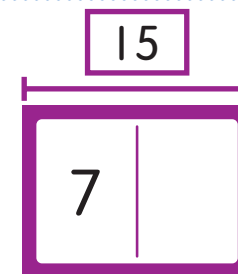
4.



$$20 - 10 = \underline{\quad}$$

$$10 + \underline{\quad} = 20$$

5.



$$15 - 7 = \underline{\quad}$$

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

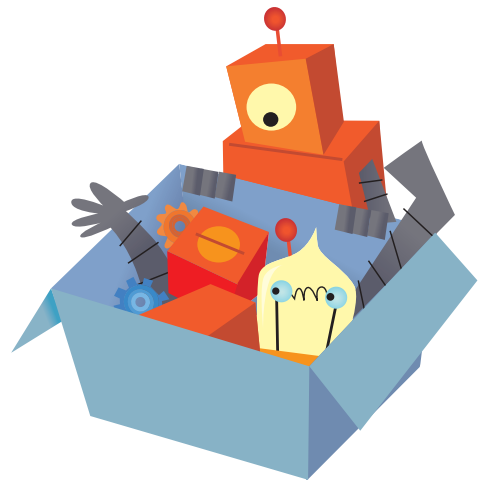
Reasoning

6. If $\text{red circle} + \text{green square} = \text{yellow triangle}$, then $\text{yellow triangle} - \text{green square} = \underline{\quad}$. Explain.

Problem Solving

Solve the problems below.

7. A basket had 17 robot parts.
Fred used some of the parts.
Now there are only 8 left.
How many parts did Fred use?



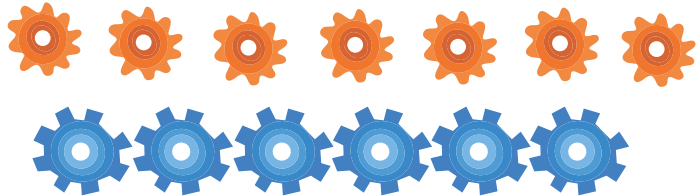
Write a related addition fact.
Use it to solve the
subtraction problem.

_____ parts

$$\begin{array}{r} \underline{\quad\quad} + \underline{\quad\quad} = \underline{\quad\quad} \\ 17 - \underline{\quad\quad} = 8 \end{array}$$

8. Which addition fact will help you subtract?

$$13 - 7 = ?$$



$$5 + 7 = 12$$



$$7 + 6 = 13$$




$$7 + 7 = 14$$



$$12 - 7 = 5$$

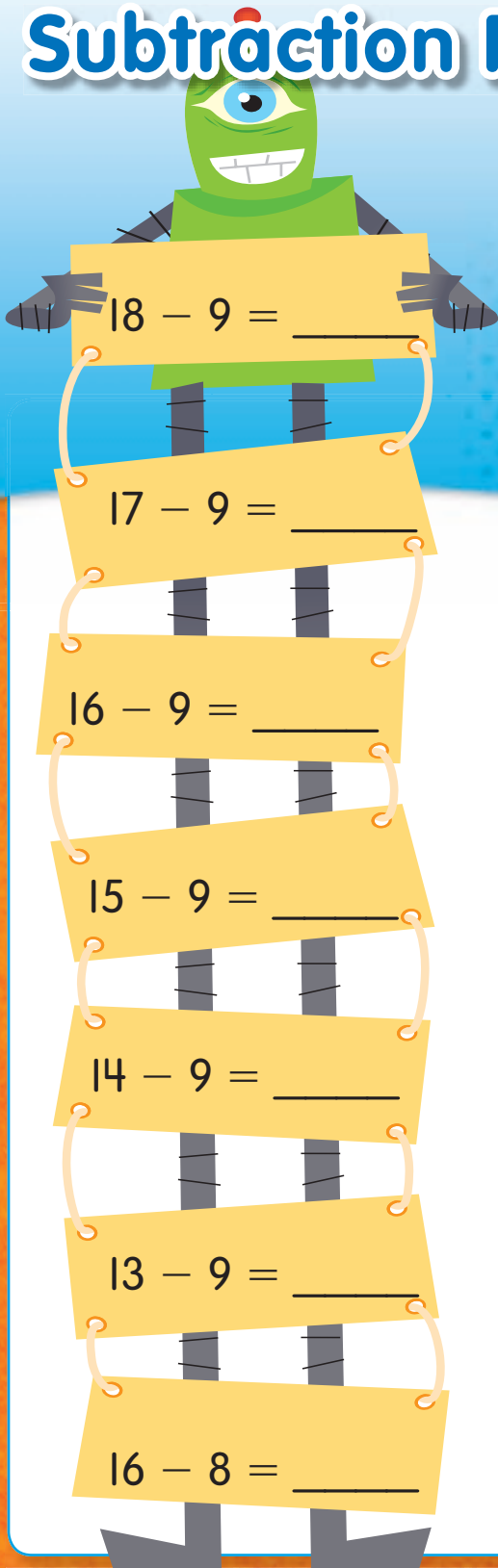


9.  **Journal** Write a subtraction sentence about Fred and a basket of 16 robot parts. Write an addition fact you could use to solve it.

Name _____



Subtraction Facts



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

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

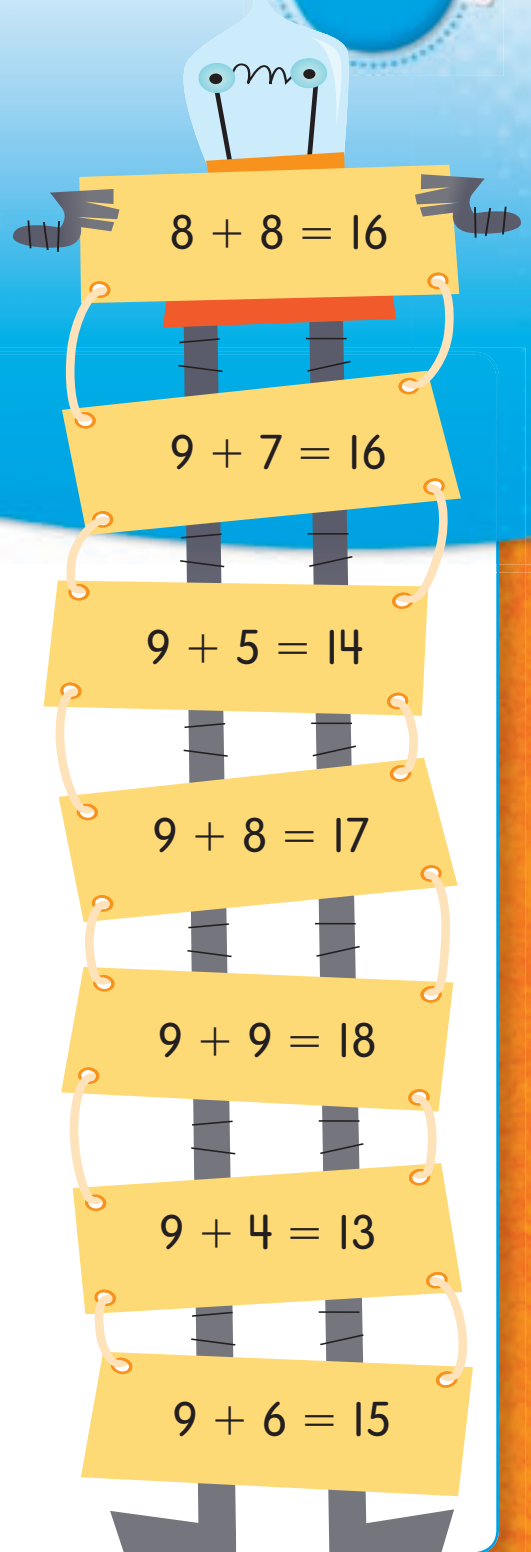
$16 - 9 = \underline{\quad}$

$15 - 9 = \underline{\quad}$

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

$13 - 9 = \underline{\quad}$

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



$8 + 8 = 16$

$9 + 7 = 16$

$9 + 5 = 14$

$9 + 8 = 17$

$9 + 9 = 18$

$9 + 4 = 13$

$9 + 6 = 15$

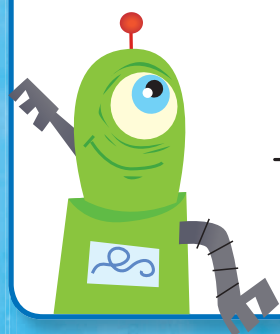


Home Connection Your child solved subtraction problems using corresponding addition facts.

Home Activity Write $15 - 8 = \underline{\quad}$ on a piece of paper. Ask your child to write an addition fact that he or she could use to solve the subtraction problem ($8 + 7 = 15$ or $7 + 8 = 15$), and then complete the subtraction sentence ($15 - 8 = 7$).

NS 2.1 Know the addition facts (sums to 20) and the corresponding subtraction facts and commit them to memory. Also **NS 2.2** .

For every subtraction fact there is a related addition fact.

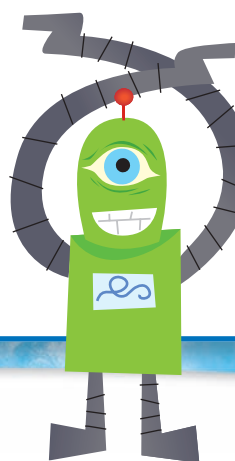


$$\begin{array}{r} 15 \\ - 7 \\ \hline \square \end{array}$$



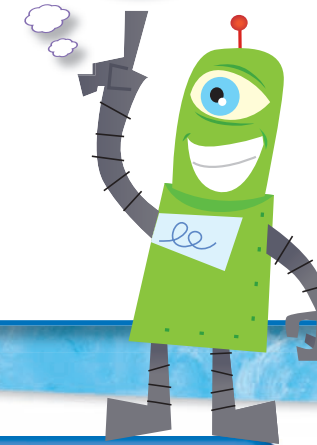
You can think addition to help you subtract.

$$\begin{array}{r} 15 \\ - 7 \\ \hline \square \end{array} + \begin{array}{r} 7 \\ \square \\ \hline 15 \end{array}$$



I add 8 to 7 to make 15.

$$\begin{array}{r} 7 \\ + \square \\ \hline 15 \end{array}$$



If $7 + 8 = 15$, then $15 - 7 = 8$.

$$\begin{array}{r} 15 \\ - 7 \\ \hline \square \end{array}$$



Guided Practice

Complete the addition fact. Then solve the subtraction fact.

1. $\begin{array}{r} 9 \\ + \square \\ \hline 14 \end{array}$ $\begin{array}{r} 14 \\ - 9 \\ \hline \square \end{array}$

2. $\begin{array}{r} 8 \\ + \square \\ \hline 13 \end{array}$ $\begin{array}{r} 13 \\ - 8 \\ \hline \square \end{array}$

3. $\begin{array}{r} 9 \\ + \square \\ \hline 17 \end{array}$ $\begin{array}{r} 17 \\ - 9 \\ \hline \square \end{array}$

4. $\begin{array}{r} 7 \\ + \square \\ \hline 14 \end{array}$ $\begin{array}{r} 14 \\ - 7 \\ \hline \square \end{array}$

5. $6 + \underline{\quad} = 14$
 $14 - 6 = \underline{\quad}$

6. $9 + \underline{\quad} = 16$
 $16 - 9 = \underline{\quad}$

Do you understand? How does the fact $6 + 9 = 15$ help you solve $15 - 6$?

Independent Practice

Subtract.

7. $\begin{array}{r} 15 \\ - 8 \\ \hline \square \end{array}$

8. $\begin{array}{r} 18 \\ - 9 \\ \hline \square \end{array}$

9. $\begin{array}{r} 13 \\ - 9 \\ \hline \square \end{array}$

10. $\begin{array}{r} 13 \\ - 7 \\ \hline \square \end{array}$

11. $16 - 7 = \underline{\quad}$

12. $14 - 8 = \underline{\quad}$

13. $15 - 9 = \underline{\quad}$

14. $17 - 9 = \underline{\quad}$

Reasonableness Can the addition fact help you solve the subtraction problem? Circle yes or no.

15. $8 + 8 = 16$
 $16 - 8 = ?$
yes no

16. $7 + 6 = 13$
 $13 - 9 = ?$
yes no

Problem Solving

Solve the problems below.

17. Sam has some crayons. He finds 6 more. Now Sam has 13 crayons. How many did Sam have before he found more? Write a subtraction sentence and the addition sentence that helped you subtract.

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

_____ crayons

18. Ted has 15 problems to solve. He has solved 7. How many more does Ted have to solve? Write a subtraction sentence and the addition sentence that helped you subtract.

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

_____ problems

19. Susan solved a subtraction problem. She used $8 + 6 = 14$ to help her solve it. Which subtraction problem did she solve?

$16 - 8 = 8$



$14 - 6 = 8$




$13 - 8 = 5$



$8 - 6 = 2$



20.  **Journal** Solve $13 - 4$. Use words, pictures, or numbers to show how you solved it.

Name _____

Problem Solving



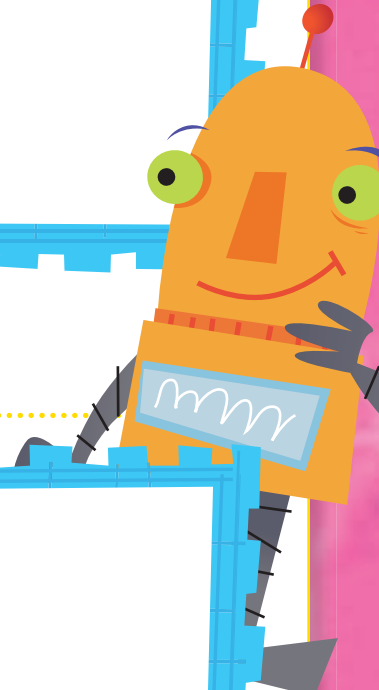
Draw a Picture and Write a Number Sentence



1. _____ ○ _____ = _____



2. _____ ○ _____ = _____



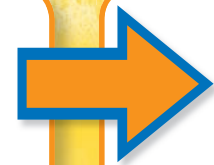
Home Connection Your child solved problems by drawing pictures and writing number sentences.

Home Activity Read the following problem to your child: 15 ducks are floating in a pond. 7 ducks fly away. How many ducks are still in the pond? Ask him or her to draw a picture and write a number sentence to answer the question (such as $15 - 7 = 8$).

MR 1.2 Use tools, such as manipulatives or sketches, to model problems. Also **NS 2.1** .

Read and Understand

The pet store had 15 fish in the fish tank.
Judy bought 6 fish.
How many fish are still in the tank?



Plan

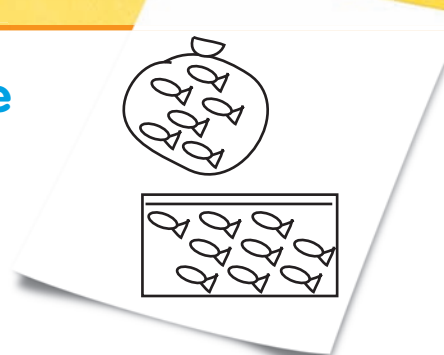


I can draw a picture and write a number sentence to solve.

$$\underline{15} \ominus \underline{6} = \underline{?}$$

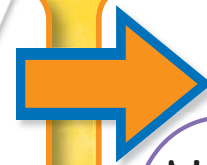


Solve



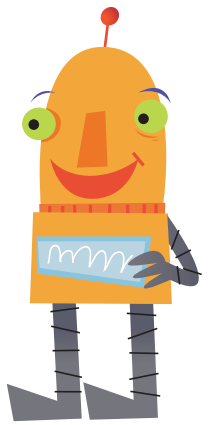
$$\underline{15} \ominus \underline{6} = \underline{9}$$

9 fish are still in the tank.



Look Back and Check

My picture shows the same answer as my number sentence. These both tell about the problem.



Guided Practice

Draw a picture and write a number sentence to solve.

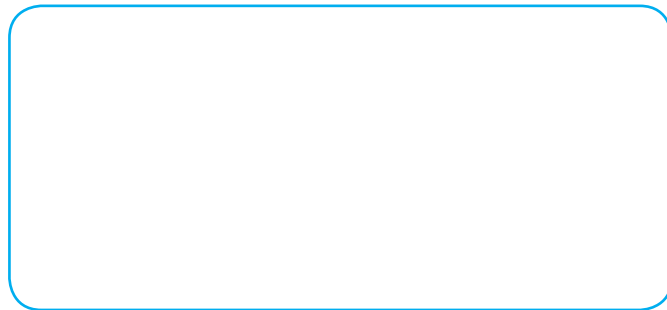
1. A bird had 18 seeds.
It ate 9 of them.
How many seeds did the bird have left?



 9 seeds

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

2. A bee landed on 7 flowers.
Then it landed on 8 more flowers.
How many flowers did the bee land on in all?



 flowers

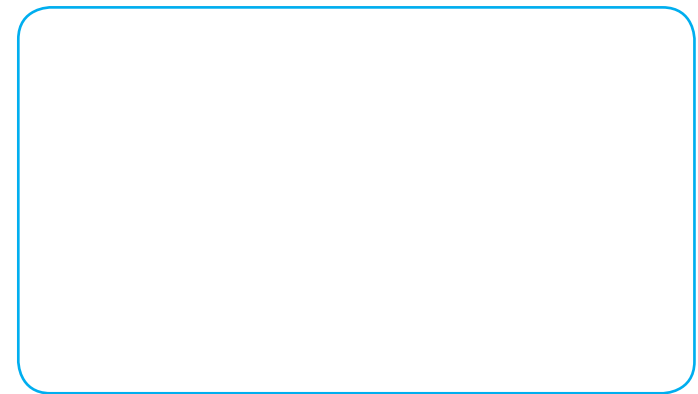
$$\underline{\quad} \bigcirc \underline{\quad} = \underline{\quad}$$

Do you understand? How do you know when to add? How do you know when to subtract?

Independent Practice

Draw a picture and write a number sentence to solve.

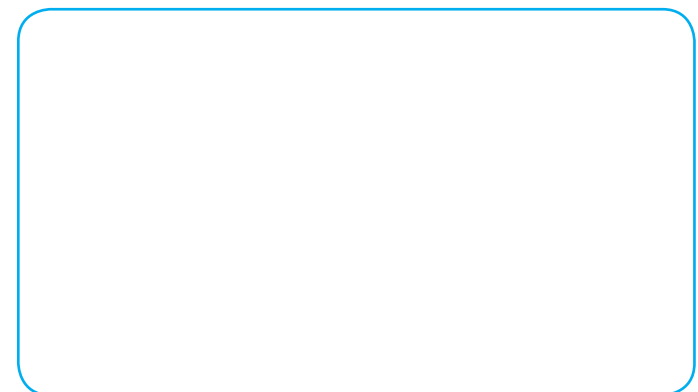
3. Joel played a ring-toss game. He threw 5 rings on his first turn. He threw 6 rings on his next turn.
How many rings did Joel throw in all?



 rings

$$\underline{\quad} \bigcirc \underline{\quad} = \underline{\quad}$$

4. Dana won 12 spinning tops at the fair. She gave 6 of them to her friend.
How many spinning tops does Dana have left?



 tops

$$\underline{\quad} \bigcirc \underline{\quad} = \underline{\quad}$$

Problem Solving

Solve the problems below.

5. 14 dogs played at the park.
9 dogs went home. How
many dogs stayed at
the park?

Draw a picture and write a
number sentence to solve.
Use counters to help.



_____ dogs

_____ ○ _____ = _____

6. There are 6 blue socks in the basket.
There are 8 red socks in the basket.
How many socks are in the basket
altogether?
Which number sentence matches
the story?

$2 + 6 = 8$



$6 + 8 = 14$



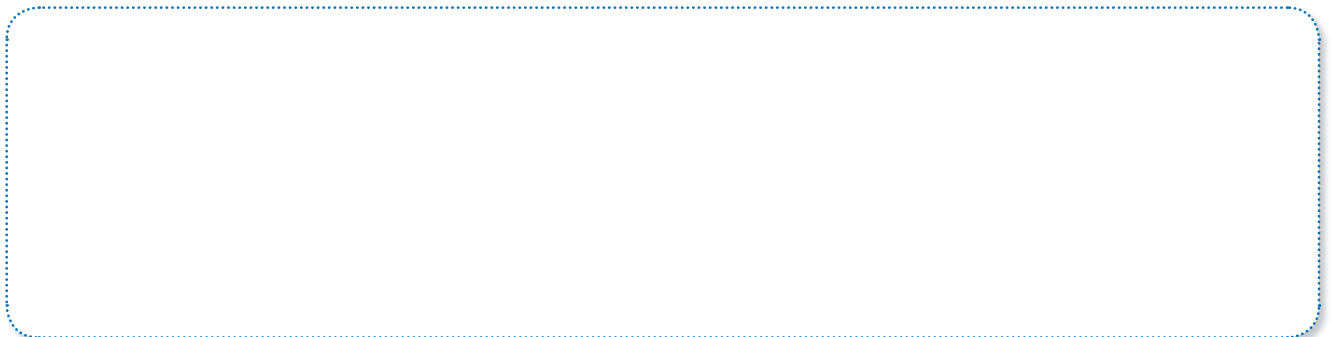
$14 - 6 = 8$



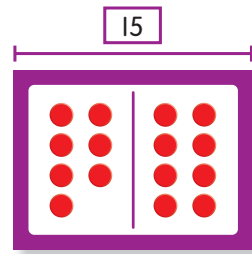
$14 - 8 = 6$



7.  **Journal** Draw a picture to show $14 - 7 = 7$.



1 $7 + 8 = 15$



$15 - 8 = 7$

$14 - 7 = 7$

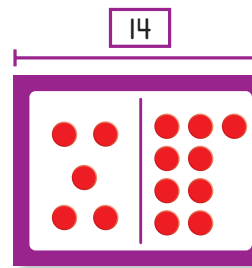
$8 - 7 = 1$

$8 - 8 = 0$

2 $5 + 9 = 14$

$9 + 5 = 14$

$14 - 9 = 5$



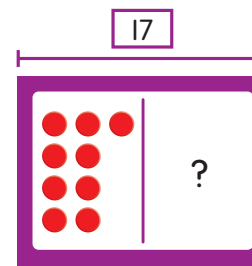
$9 - 4 = 5$

$9 - 5 = 4$

$14 - 5 = 9$

$14 - 7 = 7$

3 $17 - 9 = ?$



$7 + 9 = 16$

$9 + 7 = 16$

$9 + 8 = 17$

$17 + 0 = 17$

Name _____

4

$$\begin{array}{r} 16 \\ - 9 \\ \hline \square \end{array}$$

$$\begin{array}{r} 9 \\ + \square \\ \hline 16 \end{array}$$

- 10
- 9
- 8
- 7

5

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

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

- 6
-

- 7
-

- 13
-

- 20
-

6

$$\begin{array}{r} 18 \\ - 9 \\ \hline \square \end{array}$$

- 11
- 10
- 9
- 8

7

$15 - 0 = 15$

$15 - 7 = 8$

$7 - 0 = 7$

$7 - 7 = 0$

Oral Directions Say: Mark the correct answer. **1.** Which is a related subtraction fact for the addition sentence? **2.** Which fact is missing from the fact family? **3.** Which addition fact will help you subtract?

Set A

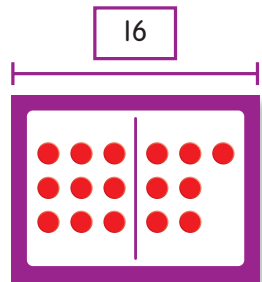
You can write related addition and subtraction facts.

Add the parts to get the whole.

$$9 + 7 = 16$$

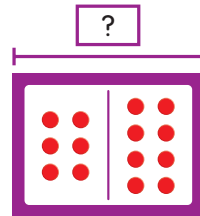
Subtract a part from the whole to get the other part.

$$16 - 7 = 9$$



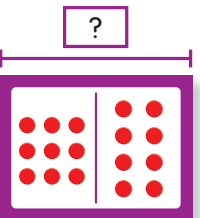
Add. Then write a related subtraction fact.

1 $6 + 8 = \underline{\quad}$



$$\underline{\quad} - \underline{\quad} = \underline{\quad}$$

2 $9 + 8 = \underline{\quad}$



$$\underline{\quad} - \underline{\quad} = \underline{\quad}$$

Set B

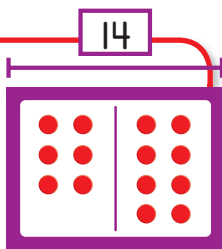
Use the parts and the whole to write the fact family.

$$\underline{14} = \underline{6} + \underline{8}$$

$$\underline{14} = \underline{8} + \underline{6}$$

$$\underline{6} = \underline{14} - \underline{8}$$

$$\underline{8} = \underline{14} - \underline{6}$$



Write the fact family for the model.

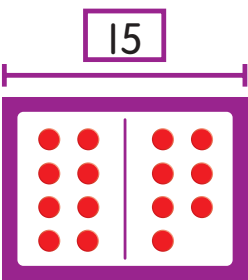
3

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

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

$$\underline{\quad} = \underline{\quad} - \underline{\quad}$$

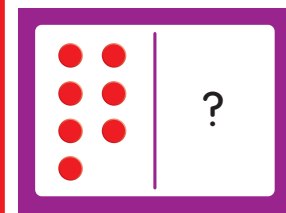
$$\underline{\quad} = \underline{\quad} - \underline{\quad}$$



Set C

You can use addition to help you subtract.

15 $15 - 7 = ?$



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

The missing part is 8.
So $15 - 7 = 8$.

Set D

You can learn subtraction facts by using addition facts that match.

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

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

Try to match all of the addition and subtraction facts to 20.

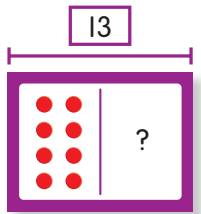
Complete the number sentences.

4

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

Think

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

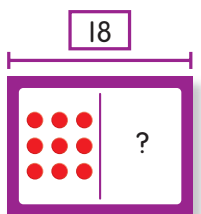


5

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

Think

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



Complete the addition fact. Then solve the subtraction fact.

6

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

$$13 - 9 = \underline{\quad}$$

7

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

$$19 - 10 = \underline{\quad}$$