Explore Number Partners for 10

Learning Targets

- Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten; decomposing a number leading to a ten; using the relationship between addition and subtraction; and creating equivalent but easier or known sums.
- Apply properties of operations as strategies to add and subtract.

SMP 1, 2, 3, 4, 5, 6, 7, 8

10 spaceships return home. Some land on the blue mat, and some land on the red mat. What are five ways the spaceships could land?

Try It

Math Toolkit

- connecting cubes
- number bond mat
- number cards

_____ and _____ make 10.

_____ and _____ make 10.

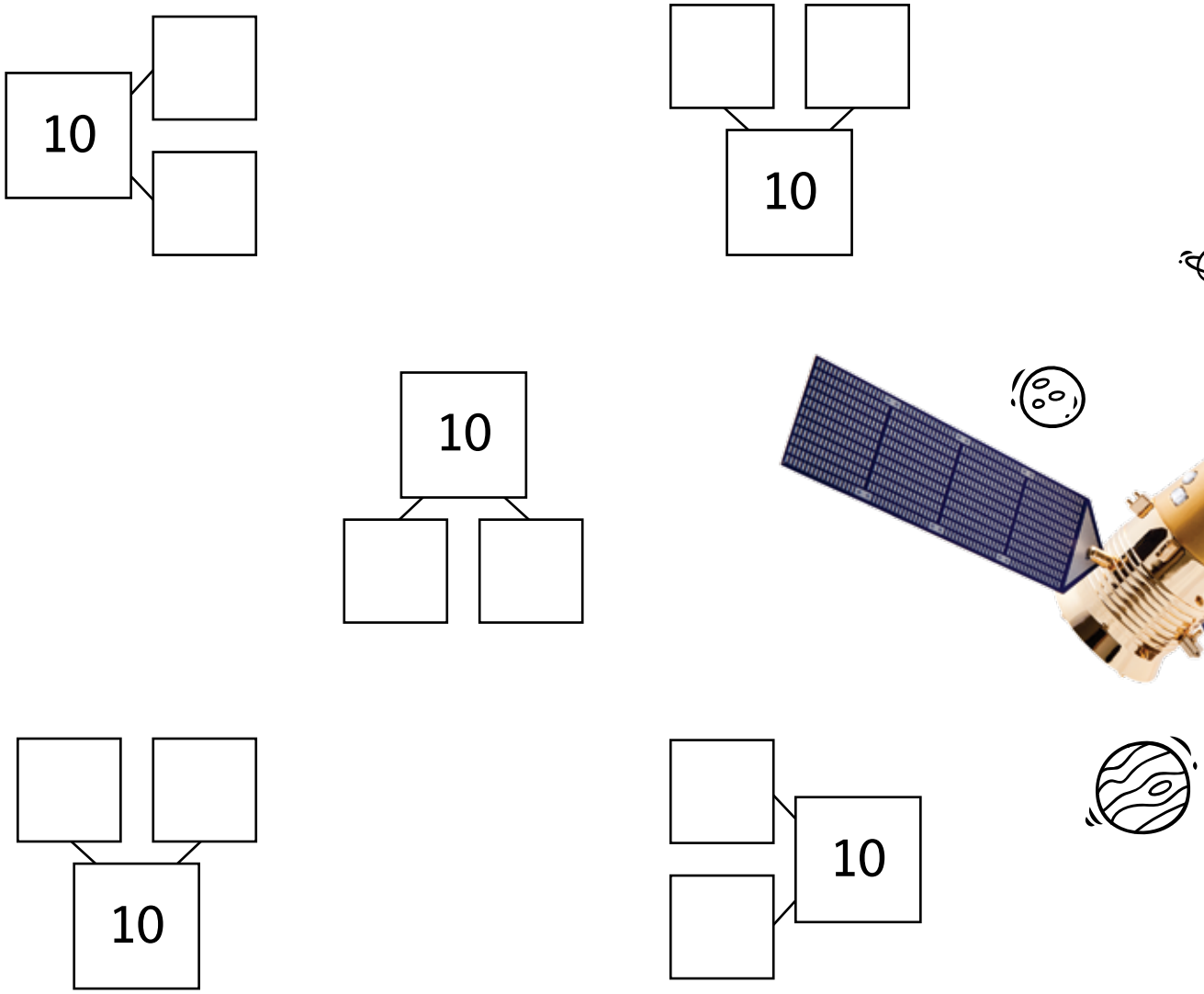
_____ and _____ make 10.

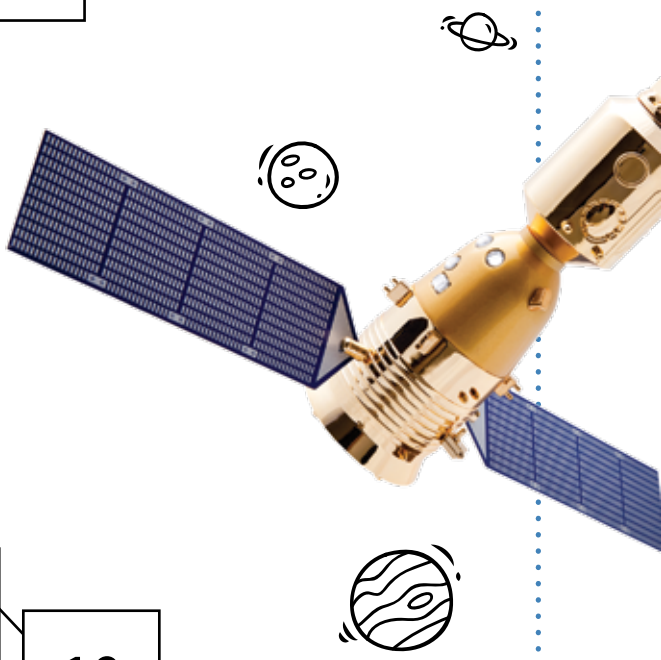
_____ and _____ make 10.

_____ and _____ make 10.

Connect It

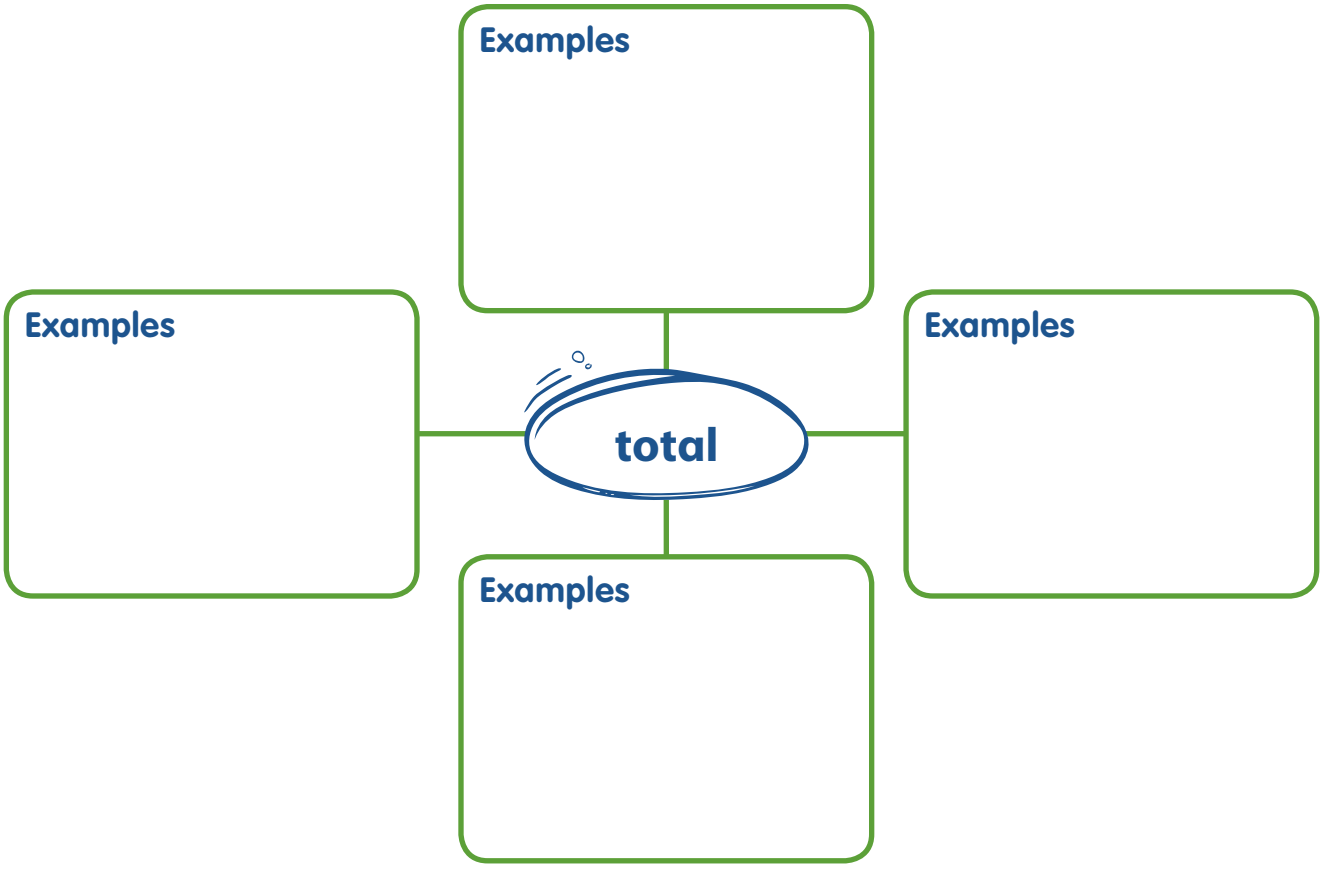
Mia needs to show two cards that make 10.
What are five ways she could show 10?





Prepare for Number Partners for 10

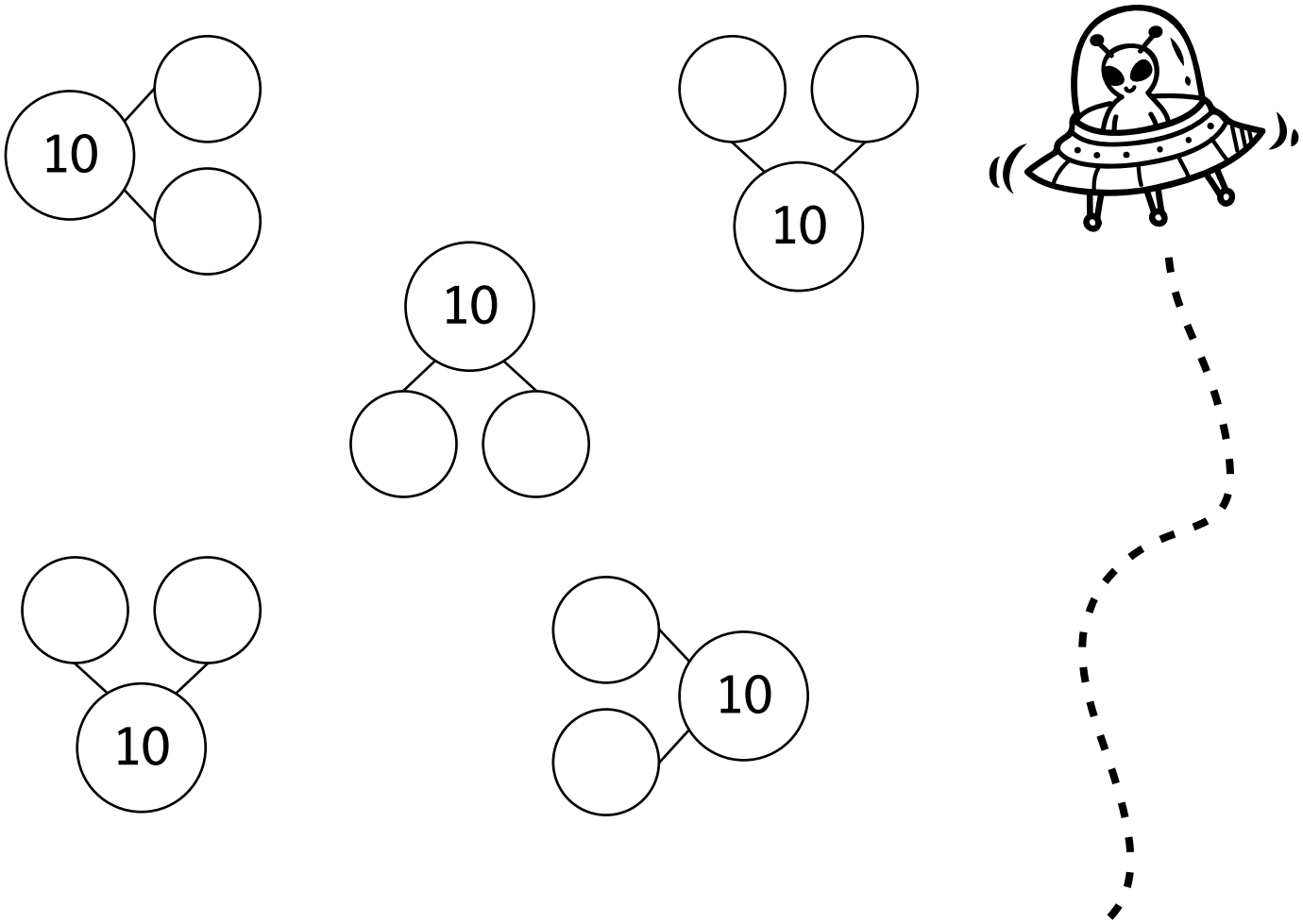
1. Think about what you know about addition. Fill in each box. Use words, numbers, and pictures. Show as many ideas as you can.

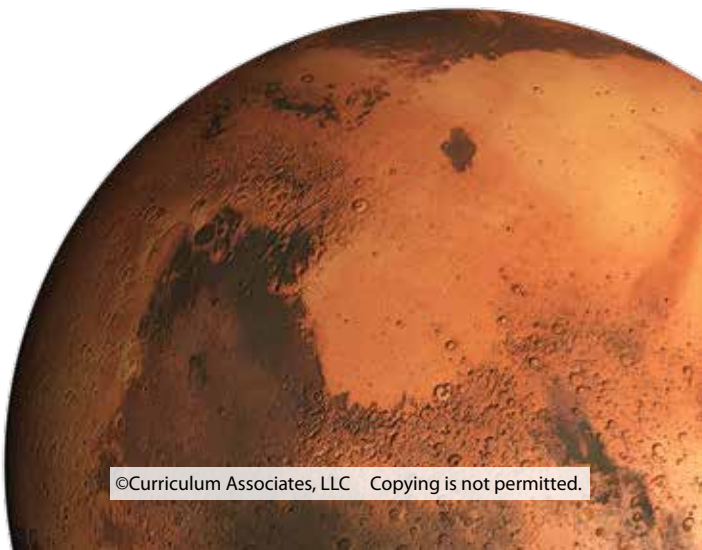


2. Jasmine has a total of 10 fish.
2 fish are yellow and the rest are red.
How many red fish does Jasmine have?

3 Solve the problem.

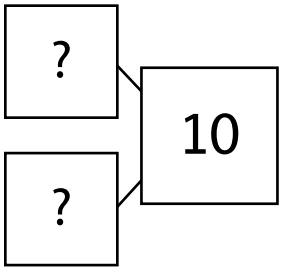
Anna wants to show five different pairs of numbers that make 10.
What are five ways she could show 10?





Develop Number Partners for 10

Jen and Kay each have cards with numbers 1 to 9.
Two cards with a sum of 10 are chosen.
What are different ways to make 10?



Try It

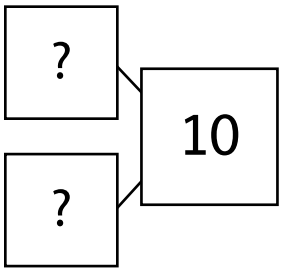
Math Toolkit

- connecting cubes
- number bond
- number cards

DISCUSS IT

To make 10, I start with one number and then . . .

Jen and Kay each have cards with numbers 1 to 9.
Two cards with a sum of 10 are chosen.
What are different ways to make 10?



Model It

Find different ways to make 10.

1 + _____ = 10 _____ + 1 = 10

2 + _____ = 10 _____ + 2 = 10

3 + _____ = 10 _____ + 3 = 10

4 + _____ = 10 _____ + 4 = 10

5 + _____ = 10

Connect It

1. How is your way like **Model It**? How is it different?

2. How do cubes help you?

Apply It

3. Look at the models. Complete the equations.

10 = 5 + _____

10 = 6 + _____ 10 = _____ + 6

10 = 7 + _____ 10 = _____ + 7

10 = 8 + _____ 10 = _____ + 8

10 = 9 + _____ 10 = _____ + 9

4 Look at the model.

Complete the two equations.

_____ + _____ = 10 _____ + _____ = 10

5 Color to show 2 + 8 = 10.

Then write another equation for your model.

_____ + _____ = 10

6 Color to show 7 + 3 = 10.

Then write another equation for your model.

_____ + _____ = 10

Practice Number Partners for 10

Look at the Example. Then solve problems 1–4.

Example

Use the row of 10 cubes.

What are two ways to make 10?

1 blue cube and 9 green cubes

$10 = 1 + 9$ $10 = 9 + 1$

1 Use the cubes. Write ways to make 10.

$10 =$ _____ $+ 9$ $10 =$ _____ $+ 1$

$10 =$ _____ $+ 8$ $10 =$ _____ $+ 2$

$10 =$ _____ $+ 7$ $10 =$ _____ $+ 3$

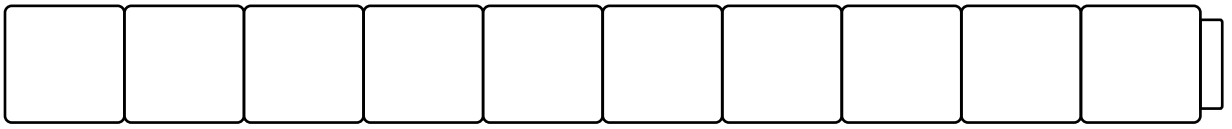
$10 =$ _____ $+ 6$ $10 =$ _____ $+ 4$

$10 =$ _____ $+ 5$

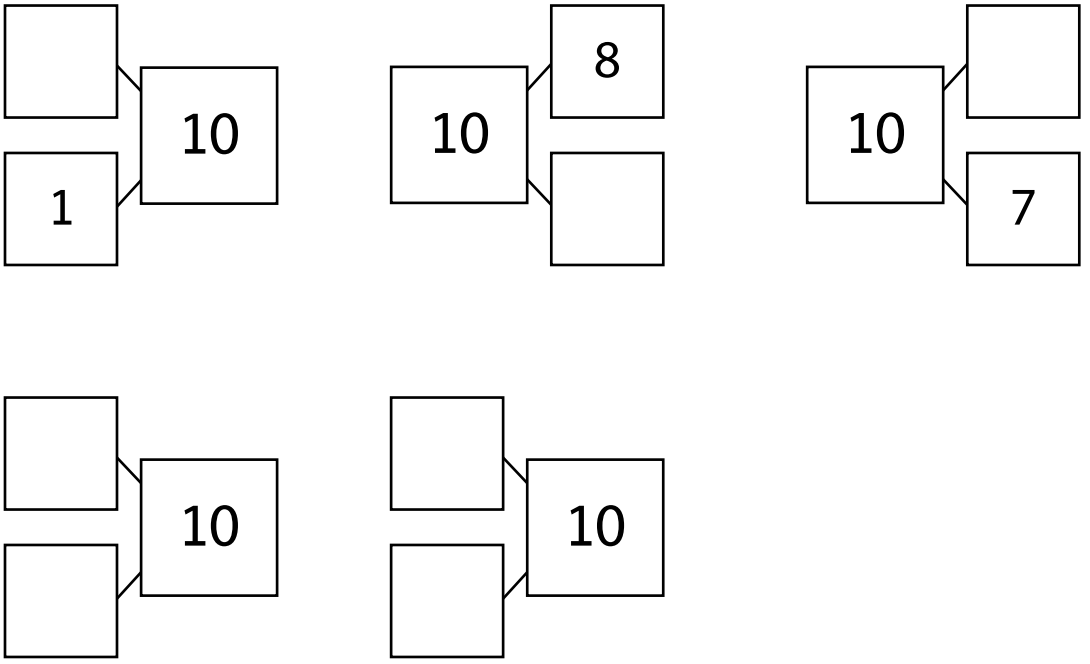
2 Look at the model.
Complete the two equations.

10 = ____ + ____ 10 = ____ + ____

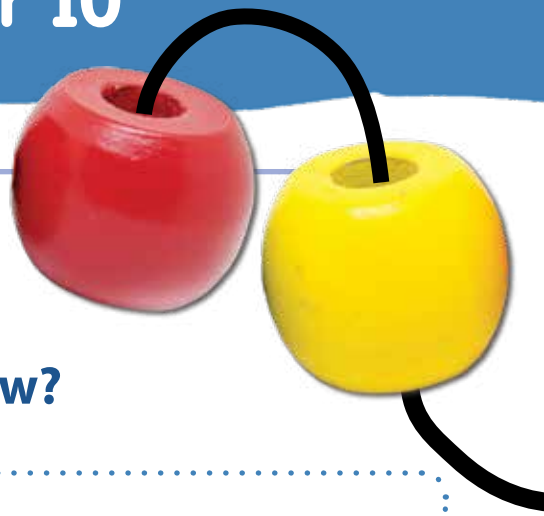
3 Color to show 5 + 5 = 10.



4 Find all the number partners for 10.
Complete the number bonds.



Develop Number Partners for 10



Dalila has 10 beads.
6 are red. The rest are yellow.
How many are yellow? How do you know?

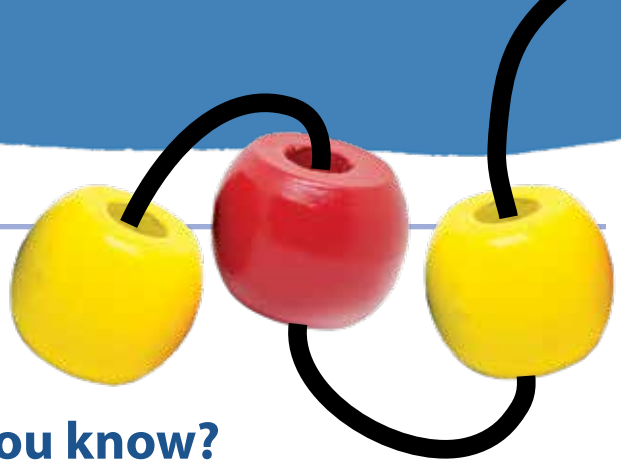
Try It

Math Toolkit

- counters
- connecting cubes
- number bonds

DISCUSS IT

How can you think about the partners for 10?



Dalila has 10 beads.
6 are red. The rest are yellow.
How many are yellow? How do you know?

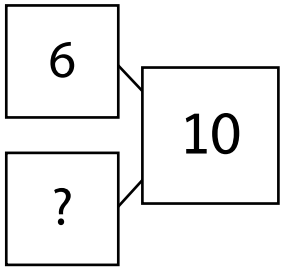
Model It

$10 - 6 = ?$

$6 + ? = 10$

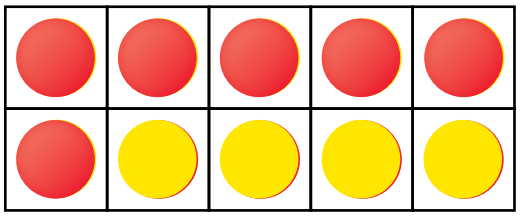
Use 10 counters. 6 are red.

The rest are yellow.



$10 - 6 =$ _____

$6 +$ _____ $= 10$

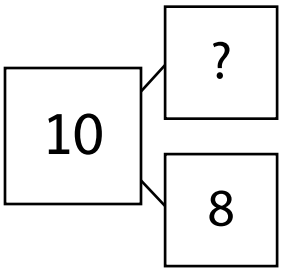


Dalila has _____ yellow beads.

Connect It

1 How is your way like **Model It**? How is it different?

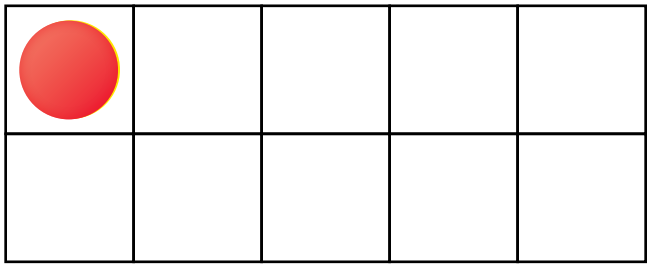
2 What does the number bond show?
Who is right? How do you know?



Buzz	Boom
$8 + 2 = 10$	$10 - 2 = 8$
$2 + 8 = 10$	$10 - 8 = 2$

Apply It

3 10 stickers in an album. Some are big. 1 is small.
How many are big?



Find ? + 1 = 10.

Start with 1.

Draw counters to make 10.

_____ + 1 = 10

4 Find 5 + ? = 10.

Draw counters. Use two colors.

5 + _____ = 10

10 − 5 = _____

5 Find 7 + ? = 10.

Draw counters. Use two colors.

7 + _____ = 10

10 − 7 = _____

6 Find 6 + ? = 10.

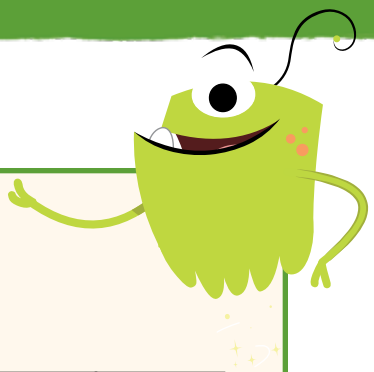
Draw counters. Use two colors.

6 + _____ = 10

10 − 6 = _____

Practice Number Partners for 10

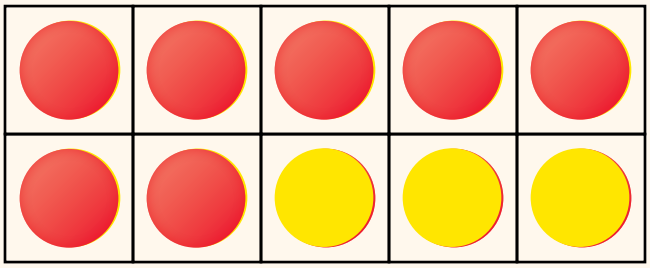
Look at the Example. Then solve problems 1–5.



Example Find 7 + ? = 10.

Start with 7.

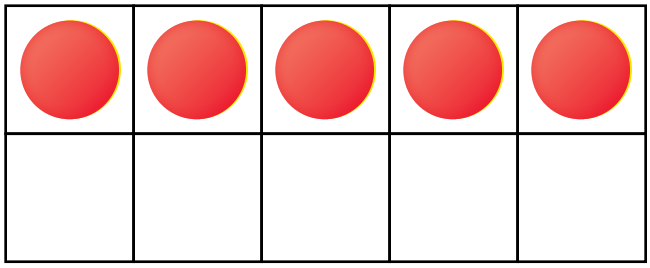
Add counters to make 10.



7 + 3 = 10

10 − 7 = 3

1 Find 5 + ? = 10.

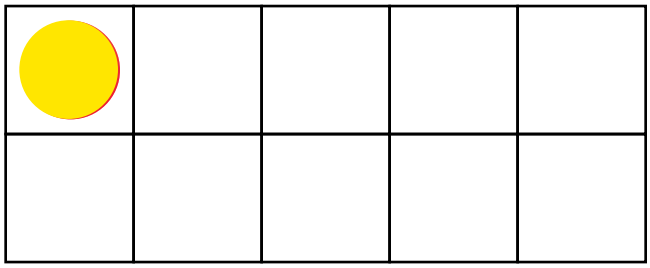


Start with 5.

Draw counters to make 10.

5 + _____ = 10

2 Find 1 + ? = 10.



Start with 1.

Draw counters to make 10.

1 + _____ = 10

3 Find 4 + ? = 10.

Draw counters. Use two colors.

4 + _____ = 10

10 − 4 = _____

4 Find 3 + ? = 10.

Draw counters. Use two colors.

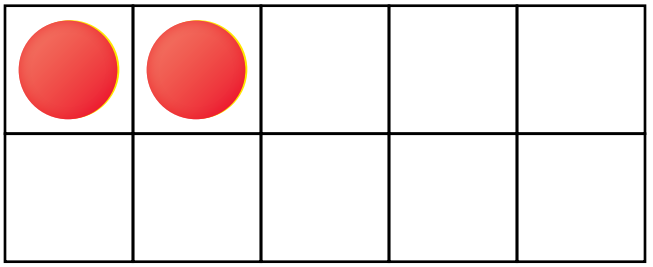
3 + _____ = 10

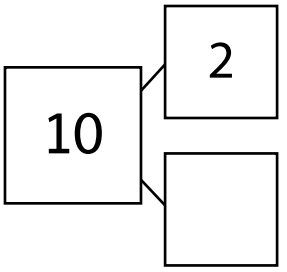
10 − 3 = _____

5 Draw counters to make 10.

Complete the number bond.

Then write two equations.





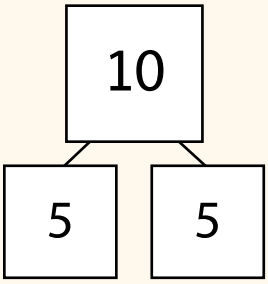
_____ + _____ = _____

_____ − _____ = _____

Refine Number Partners for 10

Complete the Example. Then solve problems 1–5.

Example Write two equations.

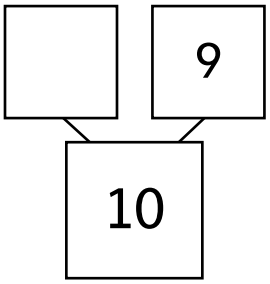


10 = 5 + 5

10 − ____ = ____

Apply It

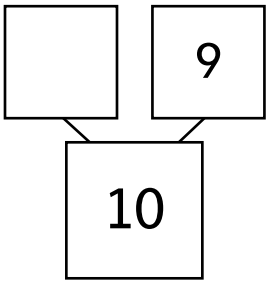
1 Complete the number bond. Write two addition equations.



10 = ____ + ____

____ + ____ = 10

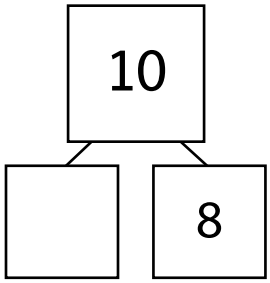
2 Complete the number bond.
Write two subtraction equations.



10 − ____ = ____

10 − ____ = ____

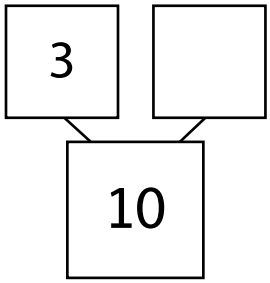
3 Complete the number bond.
Write two equations.



10 = ____ + ____

10 − ____ = ____

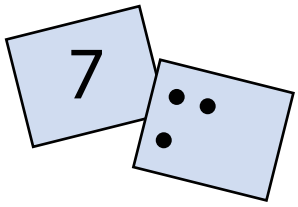
4 Complete the number bond.
Write four equations.

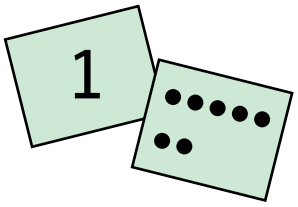


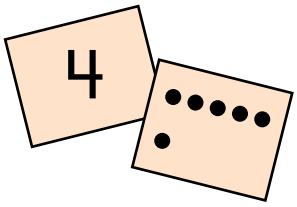
10 − ____ = ____ 10 − ____ = ____

____ + ____ = 10 ____ + ____ = 10

5 Draw an X on the pair of cards that does NOT show a way to make 10.



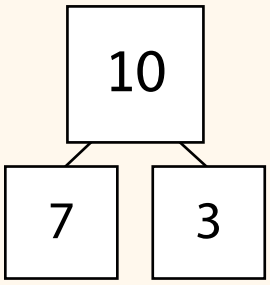




Practice Number Partners for 10

Look at the Example. Then solve problems 1–5.

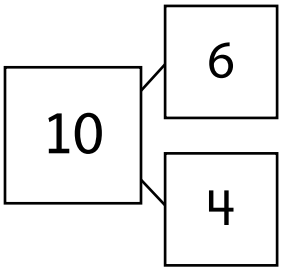
Example Write four equations.



$7 + 3 = 10$ $3 + 7 = 10$

$10 - 7 = 3$ $10 - 3 = 7$

1 Write two addition equations.

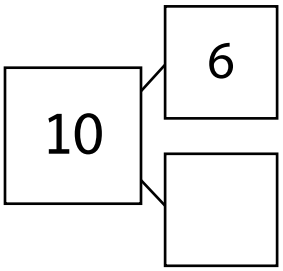


10 = ____ + ____

10 = ____ + ____

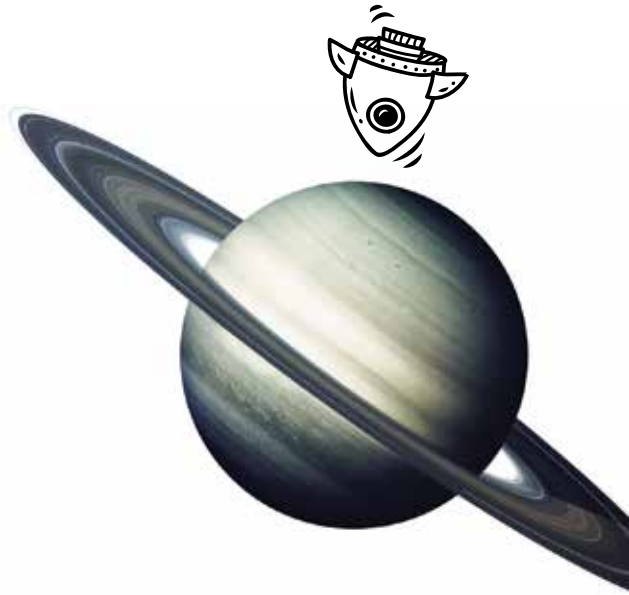
2 Complete the number bond.

Write two subtraction equations.

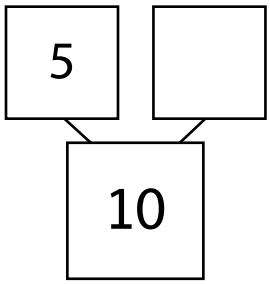


10 − ____ = 6

10 − 6 = ____



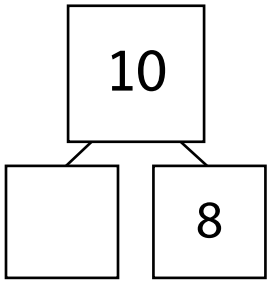
3 Complete the number bond.
Write two equations.



____ + ____ = 10

10 − ____ = 5

4 Complete the number bond.
Write four equations.



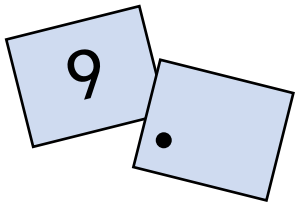
10 = ____ + ____

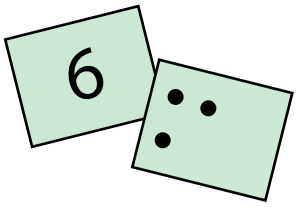
____ + ____ = 10

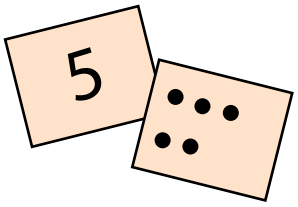
10 − ____ = ____

10 − ____ = ____

5 Draw an X on the pair of cards that does NOT show a way to make 10.





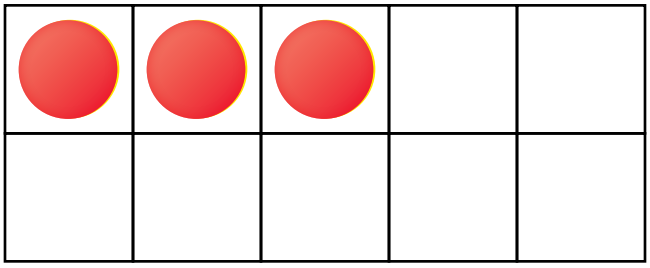


Refine Number Partners for 10

Apply It

Solve problems 1–6.

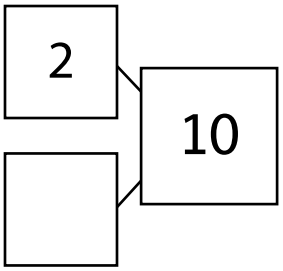
1 Draw counters to show 10. Write two equations.



10 − _____ = _____

10 − _____ = _____

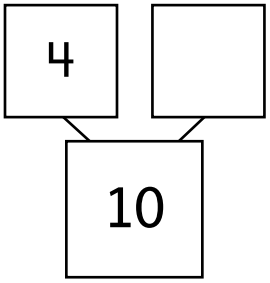
2 Complete the number bond. Write two equations.



10 = _____ + _____

10 = _____ + _____

3 Complete the number bond. Write four equations.

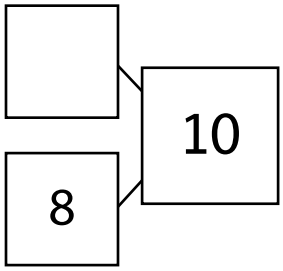


_____ + _____ = 10 10 − _____ = _____

10 = _____ + _____ 10 − _____ = _____

4 Complete the number bond.

Write two equations.

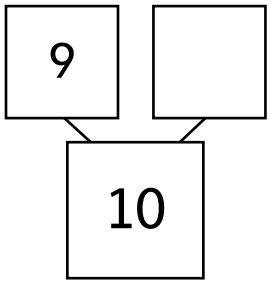


8 + _____ = 10

10 − _____ = _____

5 Complete the number bond.

Write four equations.

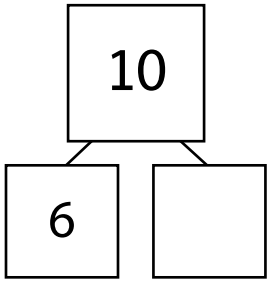


10 − _____ = _____ 10 − _____ = _____

_____ + _____ = 10 _____ + _____ = 10

6 Complete the number bond.

Write four equations.



_____ + _____ = 10 _____ + _____ = 10

10 − _____ = _____ 10 − _____ = _____

Explore Using Strategies for Addition and Subtraction Facts

Learning Target

- Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten; decomposing a number leading to a ten; using the relationship between addition and subtraction; and creating equivalent but easier or known sums.

SMP 1, 2, 3, 4, 5, 6, 7, 8

Listen to the clues.

Use counters to find missing numbers.

Try It

Math Toolkit

- counters

Connect It

I have 8 marbles.

5 marbles are red, the rest are yellow.

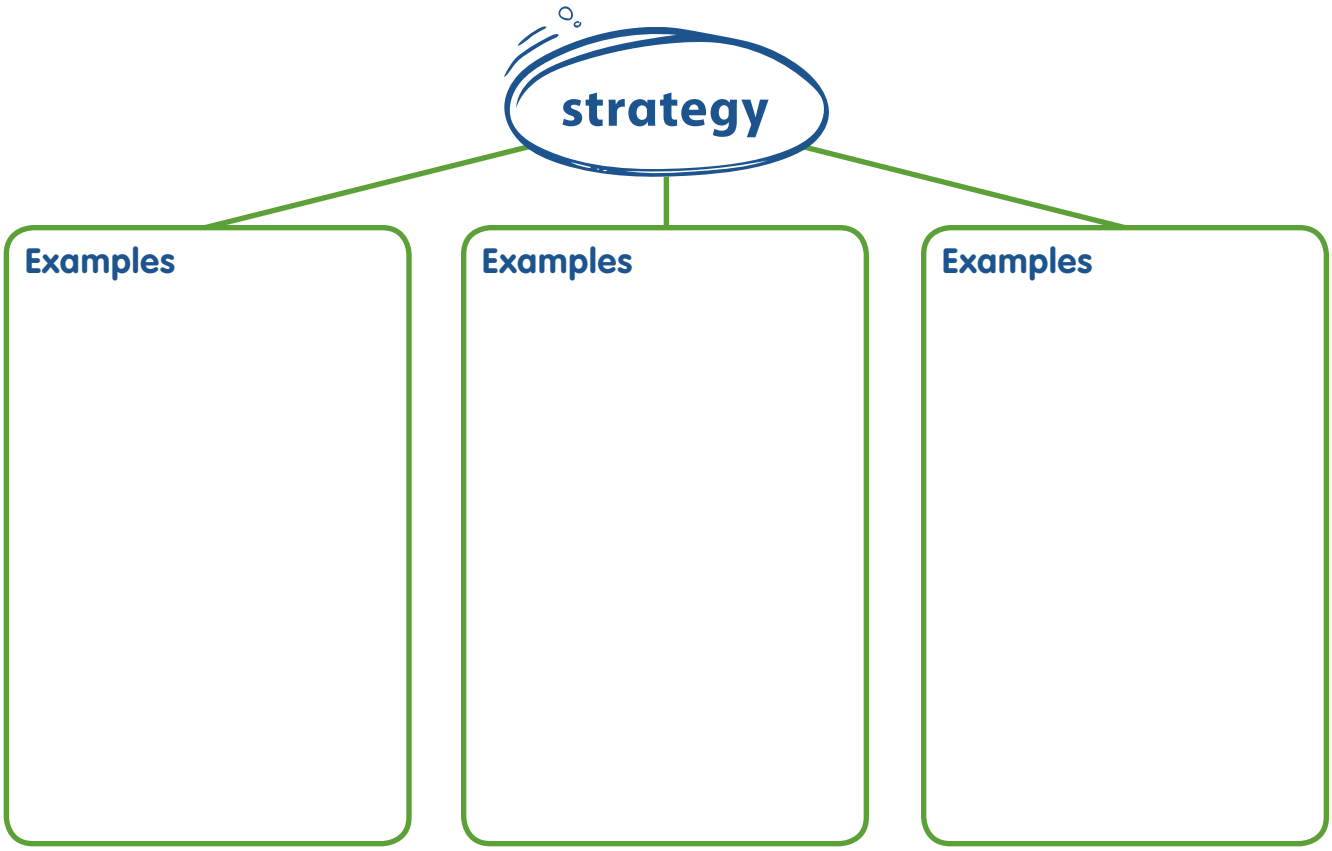
How many are yellow?

_____ ○ _____ = _____

_____ marbles are yellow.

Prepare for Using Strategies to Add and Subtract

1. Think about what you know about strategies that help you solve addition and subtraction problems. Fill in each box. Use words, numbers, and pictures. Show as many ideas as you can.



2. Explain your strategy for solving $6 - 2 =$ _____.

3 Solve the problem. Show your work.

I have 7 buttons.
3 buttons are yellow, the rest are green.
How many are green?

_____ ◯ _____ = _____

_____ buttons are green.

Develop Using Strategies for Addition and Subtraction Facts

Hugo tries to figure out the total 4 + 5.

He knows some other facts that can help him.

What facts could help him?

What is the total?

Try It

Math Toolkit

- counters

DISCUSS IT

How can knowing another addition fact help you solve this problem?

Hugo tries to figure out the total 4 + 5.
He knows some other facts that can help him.
What facts could help him?
What is the total?

Model It

Use facts you know. Write the totals.

1 + 1	1 + 2	1 + 3	1 + 4	1 + 5	1 + 6	1 + 7	1 + 8	1 + 9
2 + 1	2 + 2	2 + 3	2 + 4	2 + 5	2 + 6	2 + 7	2 + 8	
3 + 1	3 + 2	3 + 3	3 + 4	3 + 5	3 + 6	3 + 7		
4 + 1	4 + 2	4 + 3	4 + 4 8	4 + 5	4 + 6 10			
5 + 1	5 + 2	5 + 3	5 + 4 9	5 + 5 10				

- 4 + 6 and 5 + 5 can help because they have addends that are close to 4 + 5.
- 5 + 4 can help because it has the same addends as 4 + 5.
- 4 + 4 can help because it is a doubles fact and one addend is 1 less than 5.

  4 + 5 = _____

Connect It

1. How is your way like **Model It**? How is your way different?

2. Which other fact do you think is the most helpful to use when solving 4 + 5?

Apply It

3. Look at the facts in **row** A.
What addend is in each fact? _____

Look at the facts in row B.
What addend is in each fact? _____
Write all the missing totals in the table.

A	4 + 1 5	4 + 2 6	4 + 3	4 + 4	4 + 5	4 + 6 10			
B	5 + 1	5 + 2 7	5 + 3 8	5 + 4	5 + 5				
C	6 + 1 7	6 + 2 8	6 + 3 9	6 + 4 10					

4 Look at the facts in row C.

What addend is in each fact? _____

Look at the facts in **column** H.

What addend is in each fact? _____

Write all the missing totals in the table.

	G	H							
A	4 + 1 5	4 + 2 6	4 + 3 7	4 + 4 8	4 + 5 9	4 + 6 10			
B	5 + 1 6	5 + 2 7	5 + 3 8	5 + 4 9	5 + 5 10				
C	6 + 1 7	6 + 2	6 + 3 9	6 + 4					
D	7 + 1	7 + 2	7 + 3 10						
E	8 + 1	8 + 2							
F	9 + 1								

5 Complete the subtraction equations.

6 + 2 8	7 + 2 9	8 + 2 10
8 − 2 = _____	_____ − _____ = _____	_____ − _____ = _____

Practice Using Strategies to Add and Subtract

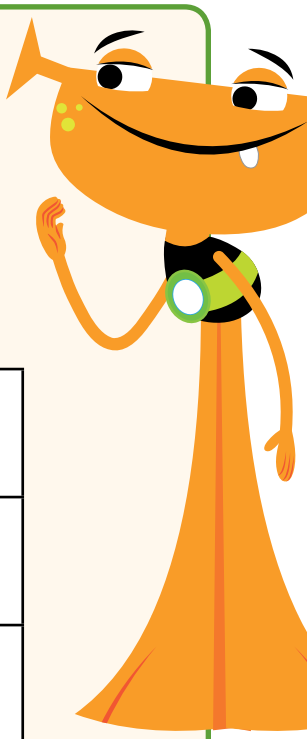
Look at the Example. Then solve problems 1–5.

Example

An addition table can help you learn facts.

It can also help you see patterns.

Below is part of an addition table.



	1 + 1 2	1 + 2 3	1 + 3 4	1 + 4 5	1 + 5 6
A	2 + 1 3	2 + 2 4	2 + 3	2 + 4	2 + 5
B	3 + 1 4	3 + 2	3 + 3	3 + 4	3 + 5

1 Look at the facts in row A.

What addend is in each fact? _____

Write the missing totals in row A in the table.

2 Look at the facts in row B.

What addend is in each fact? _____

Write the missing totals in row B in the table.

3 Write the totals in the table.

1 + 6 7	1 + 7	1 + 8	1 + 9
2 + 6	2 + 7	2 + 8	
3 + 6	3 + 7		

4 Complete the subtraction equations.

4 + 4 8	4 + 5 9	4 + 6 10
8 − 4 = _____	9 − _____ = _____	10 − _____ = _____

5 Fill in the blanks.

Then complete the subtraction equations.

5 + _____ 8	5 + _____ 9	_____ + 5 10
8 − _____ = 3	_____ − _____ = 4	_____ − _____ = 5

Develop Using Strategies for Addition and Subtraction Facts

Lila notices patterns on the fact table.

What could be some patterns she notices?

Color to show patterns.

Try It

Math Toolkit

- crayons

1 + 1 2	1 + 2 3	1 + 3 4	1 + 4 5	1 + 5 6	1 + 6 7	1 + 7 8	1 + 8 9	1 + 9 10
2 + 1 3	2 + 2 4	2 + 3 5	2 + 4 6	2 + 5 7	2 + 6 8	2 + 7 9	2 + 8 10	
3 + 1 4	3 + 2 5	3 + 3 6	3 + 4 7	3 + 5 8	3 + 6 9	3 + 7 10		
4 + 1 5	4 + 2 6	4 + 3 7	4 + 4 8	4 + 5 9	4 + 6 10			
5 + 1 6	5 + 2 7	5 + 3 8	5 + 4 9	5 + 5 10				
6 + 1 7	6 + 2 8	6 + 3 9	6 + 4 10					
7 + 1 8	7 + 2 9	7 + 3 10						
8 + 1 9	8 + 2 10							
9 + 1 10								

DISCUSS IT

A pattern I noticed on the table was . . .

Lila notices patterns on the fact table.

What could be some patterns she notices?

Color to show patterns.

Model It

Look at the facts in the colored boxes.

1 + 1 2	1 + 2 3	1 + 3 4	1 + 4 5	1 + 5 6	1 + 6 7	1 + 7 8	1 + 8 9	1 + 9 10
2 + 1 3	2 + 2 4	2 + 3 5	2 + 4 6	2 + 5 7	2 + 6 8	2 + 7 9	2 + 8 10	
3 + 1 4	3 + 2 5	3 + 3 6	3 + 4 7	3 + 5 8	3 + 6 9	3 + 7 10		
4 + 1 5	4 + 2 6	4 + 3 7	4 + 4 8	4 + 5 9	4 + 6 10			
5 + 1 6	5 + 2 7	5 + 3 8	5 + 4 9	5 + 5 10				
6 + 1 7	6 + 2 8	6 + 3 9	6 + 4 10					
7 + 1 8	7 + 2 9	7 + 3 10						
8 + 1 9	8 + 2 10							
9 + 1 10								

- facts with 1
- facts with 2
- doubles facts
- partners for 10

Connect It

1 How are your patterns like **Model It**?
How are they different?

2 Boom and Buzz look across a row.
Boom says there is a pattern in the addends.
Buzz says there is a pattern in the totals.
Who is right? How do you know?

Apply It

3 Fill in the missing totals in this table.
Complete the subtraction equations.

4 + 1 5	4 + 2 6	4 + 3 7	4 + 4 8	4 + 5 9	4 + 6 10
5 + 1	5 + 2	5 + 3	5 + 4	5 + 5	

6 − 5 = _____

7 − 5 = _____

8 − 5 = _____

9 − 5 = _____

10 − 5 = _____

4 Look at the table. Circle the ways to make 4.
Complete the addition equations.

1 + 1 2	1 + 2 3	1 + 3 4	1 + 4 5
2 + 1 3	2 + 2 4	2 + 3 5	2 + 4 6
3 + 1 4	3 + 2 5	3 + 3 6	3 + 4 7
4 + 1 5	4 + 2 6	4 + 3 7	4 + 4 8

_____ + _____ = 4

_____ + _____ = 4

_____ + _____ = 4

5 Look at the table. Circle the ways to make 7.
Complete the addition equations.

1 + 1 2	1 + 2 3	1 + 3 4	1 + 4 5	1 + 5 6	1 + 6 7
2 + 1 3	2 + 2 4	2 + 3 5	2 + 4 6	2 + 5 7	2 + 6 8
3 + 1 4	3 + 2 5	3 + 3 6	3 + 4 7	3 + 5 8	3 + 6 9
4 + 1 5	4 + 2 6	4 + 3 7	4 + 4 8	4 + 5 9	4 + 6 10
5 + 1 6	5 + 2 7	5 + 3 8	5 + 4 9	5 + 5 10	
6 + 1 7	6 + 2 8	6 + 3 9	6 + 4 10		

7 = _____ + _____

7 = _____ + _____

7 = _____ + _____

7 = _____ + _____

7 = _____ + _____

7 = _____ + _____

Practice Using Strategies to Add and Subtract

Look at the Example. Then solve problems 1–5.

Example The shaded boxes show ways to make 4.

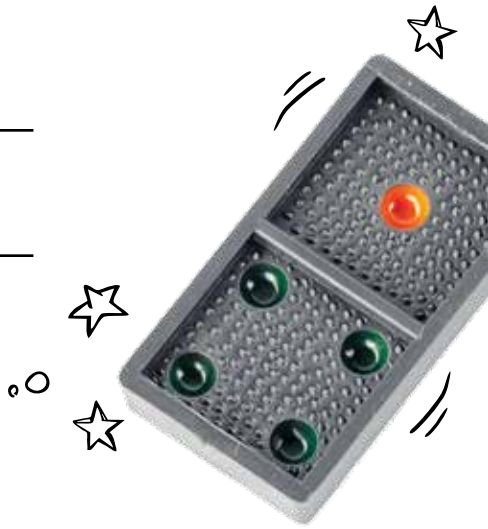
1 + 1 2	1 + 2 3	1 + 3 4	1 + 4
2 + 1 3	2 + 2 4	2 + 3	2 + 4 6
3 + 1 4	3 + 2	3 + 3 6	3 + 4 7
4 + 1 5	4 + 2 6	4 + 3 7	4 + 4 8

1 Write the missing totals in the table.

2 Look at the table. Circle the ways to make 5.
Complete the addition equations.

_____ + _____ = 5 5 = _____ + _____

_____ + _____ = 5 5 = _____ + _____



3 Write the missing totals for the doubles facts in the table.

1 + 1	1 + 2 3	1 + 3 4
2 + 1 3	2 + 2	2 + 3 5
3 + 1 4	3 + 2 5	3 + 3

4 Circle the totals for the doubles facts. Use the pattern to complete these addition equations.

4 + 4 = _____ 5 + 5 = _____

5 Fill in the blanks.
Then complete the subtraction equations.

2 + _____ 4	3 + _____ 6	_____ + 4 8

4 − _____ = 2 _____ − _____ = 3 _____ − _____ = 4

Refine Using Strategies for Addition and Subtraction Facts

Complete the Example. Then solve problems 1–4.

Example Fill in the blanks.

4 + 3 7	4 + 4 8	4 + 5 9	4 + 6 10
___ + 3 8	5 + ___ 9	___ + ___ 10	

Apply It

Fill in the blanks.

1

___ + 1 8	7 + ___ 9	___ + ___ 10
8 + ___ 9	___ + 2 10	

2

2 + ___ 6	___ + 5 7	2 + 6 ___	___ + 7 ___	2 + ___ 10
___ + 4 7	3 + ___ 8	___ + ___ 9	3 + ___ ___	

3 Fill in the blanks.

Then complete the subtraction equations.

4 + ____
9

9 − ____ = 4

9 − 4 = ____

4 + 6
____

____ − 6 = 4

____ − 4 = 6

4 Fill in the blanks.

6 + 1 7	6 + 2 ____	6 + 3 9	6 + 4 ____
7 + 1 ____	7 + 2 9	7 + 3 ____	
8 + 1 9	8 + 2 ____		
9 + 1 ____			

Practice Using Strategies to Add and Subtract

Look at the Example. Then solve problems 1–5.

Example

1 + 6 7	1 + 7 8	1 + 8 9	1 + 9 10

1 Fill in the blanks.

5 + ___ 6	___ + ___ 7	___ + 3 8	5 + ___ 9
___ + 1 7	6 + ___ 8	___ + ___ 9	___ + 4 10

2 Fill in the blanks.

___ + 3 6	3 + ___ 7	3 + ___ 8	___ + 6 9
4 + ___ 7	___ + 4 ___	___ + 5 9	4 + 6 ___

3 Fill in the blanks.
Then complete the subtraction equations.

7 + ____
9

8 + 2
____

9 − ____ = 7

9 − 7 = ____

____ − 2 = 8

____ − 8 = 2

4 Fill in the blanks.

4 + ___ 6	4 + ___ ___	___ + 4 8	___ + 5 ___
___ + 2 ___	5 + ___ 8	5 + ___ ___	___ + 5 10

5 Use the facts in problem 4. Complete the subtraction facts.

7 − ____ = ____

10 − ____ = ____

9 − ____ = ____

8 − ____ = ____

Refine Using Strategies for Addition and Subtraction Facts

Apply It

Solve problems 1–4.

1 Fill in the table.

Partners for 7	Partners for 8	Partners for 9	Partners for 10
0 + _____ = 7	0 + 8 = _____		
1 + _____ = 7			
2 + _____ = 7			
3 + _____ = 7			
4 + _____ = 7			
5 + _____ = 7			
6 + _____ = 7			
7 + _____ = 7			

2 The number partners for 7 are listed in order to show a pattern. Why is this helpful?

3 Fill in the blanks.

Facts with 7	Facts with 8	Facts with 9	Facts with 10
7 − 7 = _____	8 − 7 = _____	9 − 7 = _____	10 − 7 = _____
7 − 6 = _____	8 − 6 = _____	9 − 6 = _____	10 − 6 = _____
7 − 5 = _____	8 − 5 = _____	9 − 5 = _____	10 − 5 = _____
7 − 4 = _____	8 − 4 = _____	9 − 4 = _____	10 − 4 = _____
7 − 3 = _____	8 − 3 = _____	9 − 3 = _____	10 − 3 = _____
7 − 2 = _____	8 − 2 = _____	9 − 2 = _____	10 − 2 = _____
7 − 1 = _____	8 − 1 = _____	9 − 1 = _____	10 − 1 = _____

What patterns do you notice?

4 Buzz says he has found all of the ways to make 6.

0 + 6 = 6	1 + 5 = 6	2 + 3 = 6	3 + 3 = 6
4 + 2 = 6	5 + 1 = 6	6 + 0 = 6	

Do you agree? Circle: Yes No

Tell why.

Explore Finding the Unknown Number

Learning Target

- Determine the unknown whole number in an addition or subtraction equation relating three whole numbers.

SMP 1, 2, 3, 4, 5, 6, 7

Talia brings 9 pencils to school.
She gives some to her friends.
She has 3 left.
How many pencils does Talia give away?

Try It

Math Toolkit

- counters

9 − _____ = 3

Talia gives away _____ pencils.

Connect It

3 birds are eating.
More birds join them.
Now there are 8 birds.
How many birds joined?

3 + _____ = 8

_____ birds joined.

Prepare for Finding the Unknown Number

1. Think about what you know about figuring out unknown numbers in equations. Fill in each box. Use words, numbers, and pictures. Show as many ideas as you can.

In My Own Words	My Pictures
unknown numbers	
Examples	**Non-Examples**

2. Jared has 13 pens. He gives some to his mother. Jared has 6 pens left. Write an equation for the problem. Leave a blank for the unknown number.

3 Solve the problem. Draw to show your work.

5 lions are drinking. More lions join them.
Now there are 9 lions.
How many lions joined?

5 + _____ = 9

_____ lions joined.

Develop Finding the Unknown Number

Some pies are on the table.
Ms. Karly brings 7 more pies.
Now there are 15 pies.
How many pies were on the table to start?

Try It

Math Toolkit

- counters
- 10-frames
- connecting cubes
- number paths

DISCUSS IT

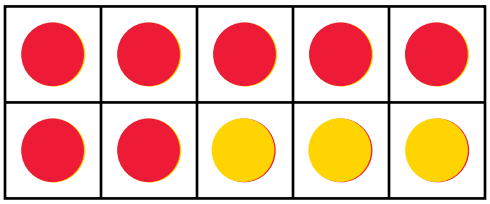
I used the strategy . . .

Some pies are on the table.
Ms. Karly brings 7 more pies.
Now there are 15 pies.
How many pies were on the table to start?

Model It

Find the missing number in the equation ? + 7 = 15.

Start with the number you know.



Add more until you get to the total.

How many counters did you add?

_____ + 7 = 15

_____ pies were on the table to start.

Connect It

1 How is your way like **Model It**?
How is it different?

2 Buzz says that the missing number in both of these equations is 6.
Is he right? How do you know?

$? + 7 = 13$

$13 = ? + 7$

Apply It

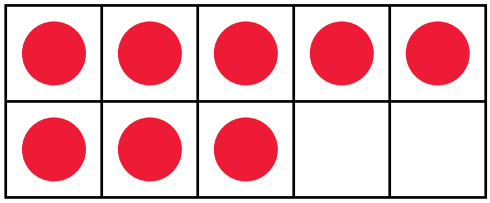
3 Find the missing number.

How many more to make 14?

8 + _____ = 14

	8	9	10	11	12	13	14

4 Find the missing number.



11 = ? + 8

11 = _____ + 8

5 Find the missing number.

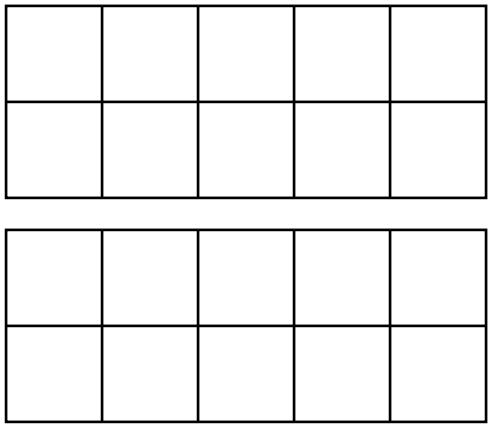
? + 3 = 12

_____ + 3 = 12

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	

6 Find the missing number.

9 + 7 = _____



Practice Finding the Unknown Number

Look at the Example. Then solve problems 1–5.

Example

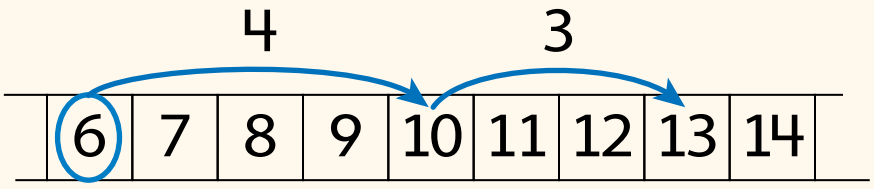
Dawn sees 6 bunnies. More bunnies come.

Now there are 13 bunnies.

How many bunnies come?

$6 + 7 = 13$

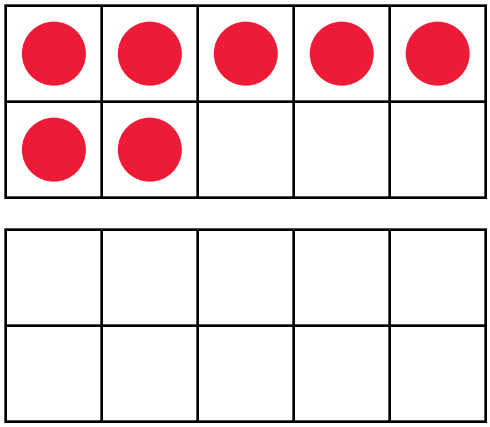
7 bunnies come.



1 Find the missing number.

$7 + ? = 12$

$7 + \_\_\_\_ = 12$



2 Find the missing number.

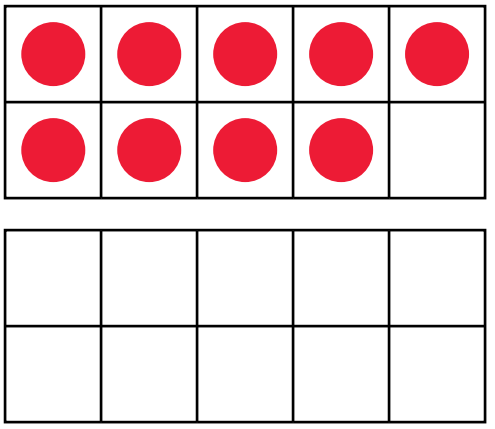
$9 + 7 = \_\_\_\_$

	8	9	10	11	12	13	14	15	16	17

3 Find the missing number.

$17 = 9 + ?$

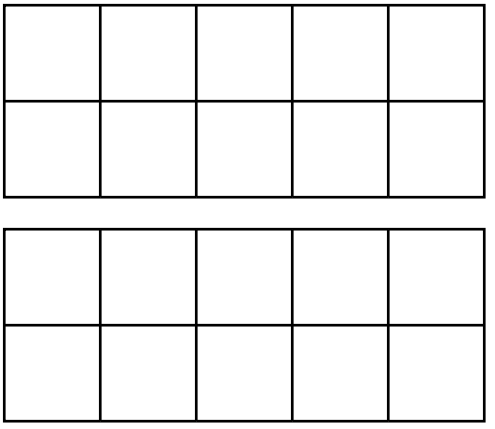
$17 = 9 + \_\_\_\_$



4 Find the missing number.

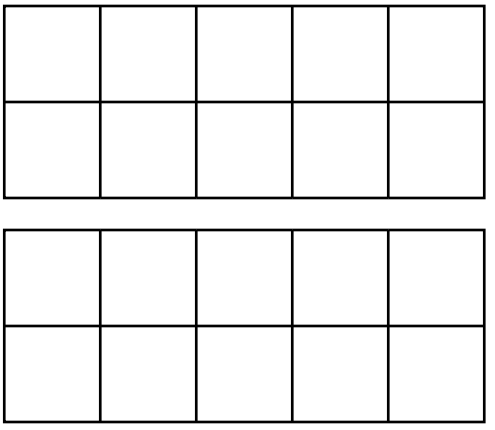
$? + 6 = 15$

$\_\_\_\_ + 6 = 15$



5 Find the missing number.

$13 = 8 + \_\_\_\_$



Develop Finding the Unknown Number

14 cherries in a snack bag. Maddie eats some. Now there are 9 cherries. How many does Maddie eat?

Try It

Math Toolkit

- counters
- connecting cubes
- 10-frames
- number paths

Maddie eats _____ cherries.

DISCUSS IT

How can you use addition to find the missing number in this problem?

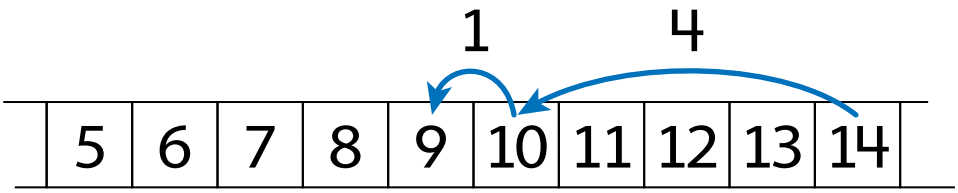
14 cherries in a snack bag. Maddie eats some. Now there are 9 cherries. How many does Maddie eat?

Model It

Find the missing number in the equation.

14 − ? = 9

Use a number path.



14 − _____ = 10

10 − _____ = 9

14 − _____ = 9

Maddie eats _____ cherries.

Connect It

1. How is your way like **Model It**?
   How is it different?

2. What is another strategy you could use to find the missing number?

Apply It

3. Find the missing number.

   13 − _____ = 7

	5	6	7	8	9	10	11	12	13	14	

4. Find the missing number.

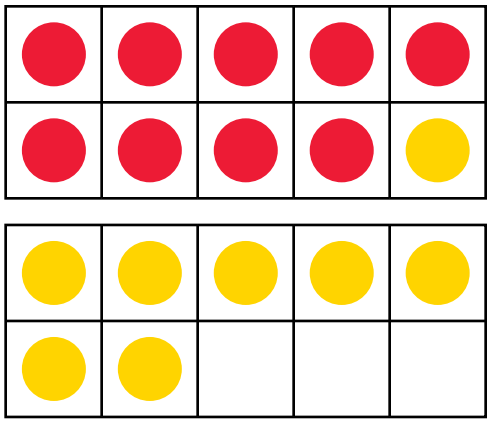
   _____ − 5 = 6

	5	6	7	8	9	10	11	12	

5 Find the missing number.

$17 - 8 = ?$

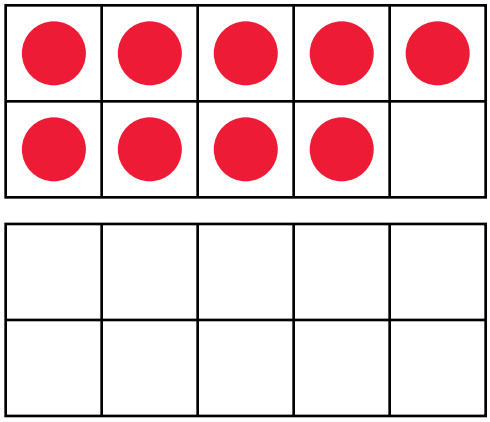
$17 - 8 =$ _____



6 Find the missing number.

$9 = 15 - ?$

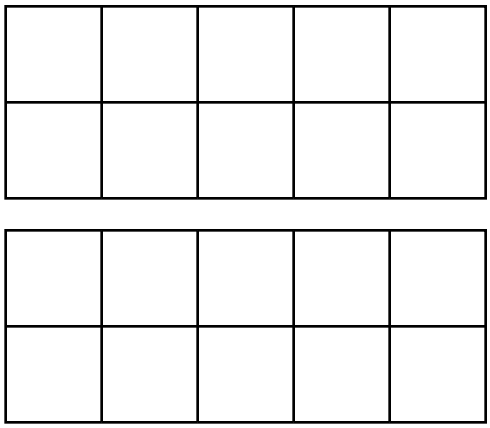
$9 = 15 -$ _____



7 Find the missing number.

$? - 7 = 9$

_____ $- 7 = 9$



Practice Finding the Unknown Number

Look at the Example. Then solve problems 1–5.

Example

15 basketballs. Some roll away.

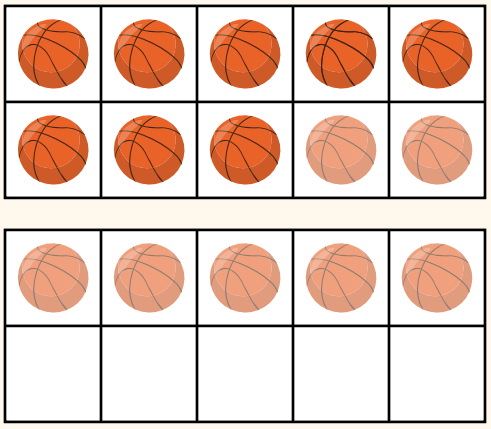
Now there are 8.

How many roll away?

$15 - ? = 8$

$8 + 7 = 15$

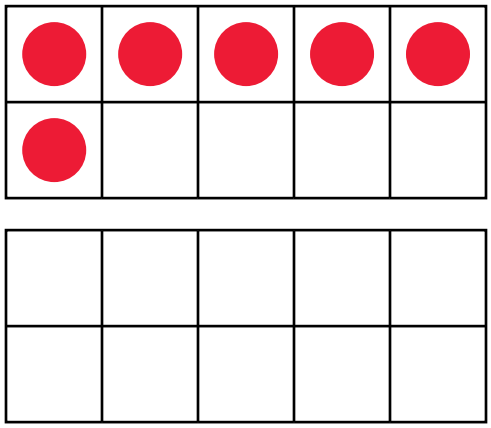
7 basketballs roll away.



1 Find the missing number.

$12 - ? = 6$

$12 - \_\_\_\_ = 6$



2 Find the missing number.

$\_\_\_\_ - 8 = 6$

	6	7	8	9	10	11	12	13	14	15	

3 Find the missing number.

5 = _____ − 7

	5	6	7	8	9	10	11	12	13	14	

4 Find the missing number.

9 = ? − 4

9 = _____ − 4

5 Find the missing number.

11 − _____ = 3

Refine Finding the Unknown Number

Complete the Example. Then solve problems 1–4.

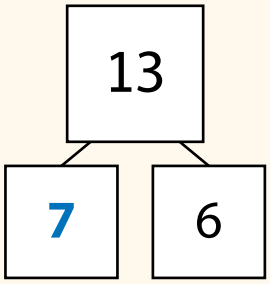
Example Find the missing number in ? + 6 = 13.

Start with 6 cubes.

Double this to get 12 cubes.

Add 1 more to make 13.

How many cubes did you add?

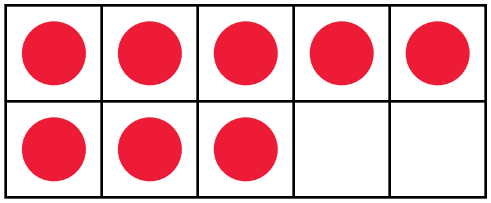


_____ + 6 = 13

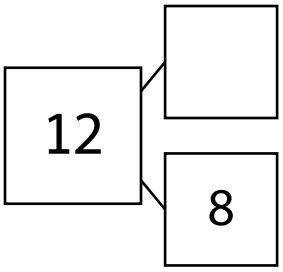
Apply It

1 Find the missing number.

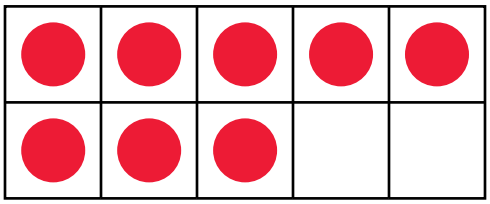
Complete the number bond.



_____ + 8 = 12

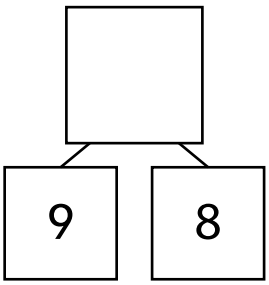


2 Find the missing number.
Complete the number bond.

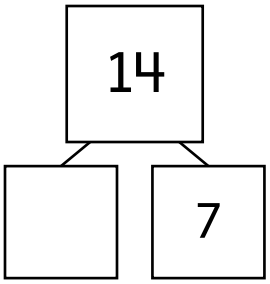


? − 9 = 8

_____ − 9 = 8

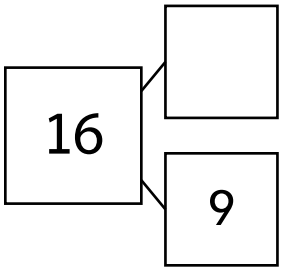


3 Find the missing number.
Complete the number bond.



14 = _____ + 7

4 Find the missing number.
Complete the number bond.



_____ = 16 − 9

	6	7	8	9	10	11	12	13	14	15	16	17

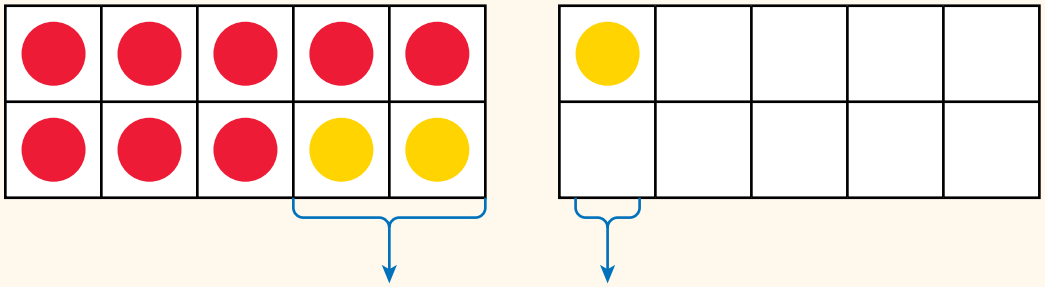
Practice Finding the Unknown Number

Look at the Example. Then solve problems 1–4.

Example

Find the missing number.

$11 - ? = 8$

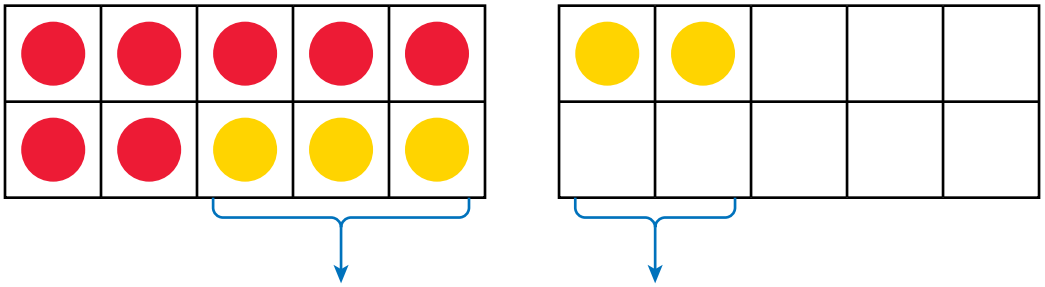


Take away 2. Take away 1.

$11 - 3 = 8$

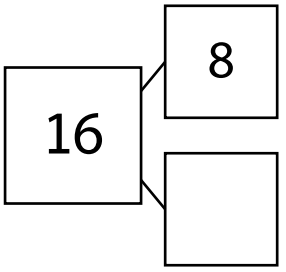
1 Find the missing number.

$12 - \_\_\_\_ = 7$



Take away _____. Take away _____.

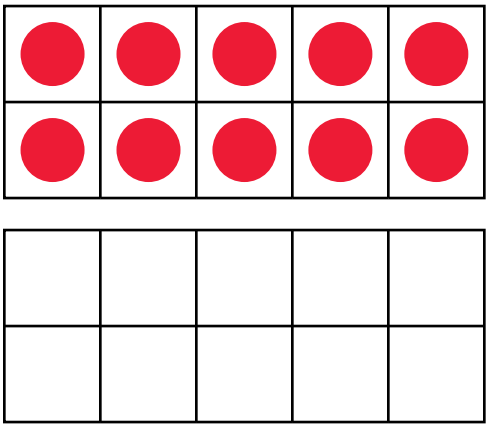
2 Find the missing number.



16 = ? + 8

16 = _____ + 8

3 Find the missing number.



10 + _____ = 20

4 The bike store has 7 green bikes and 8 blue bikes.
How many bikes in the store?

	6	7	8	9	10	11	12	13	14	15	16	

7 + 8 = _____

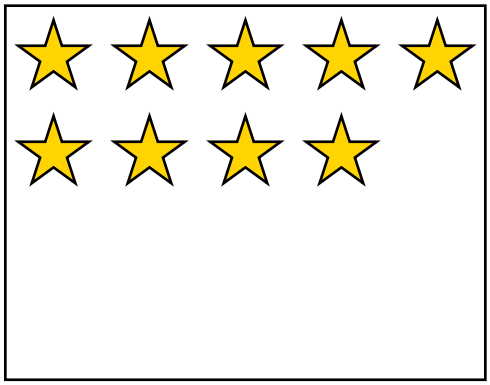
_____ bikes

Refine Finding the Unknown Number

Apply It

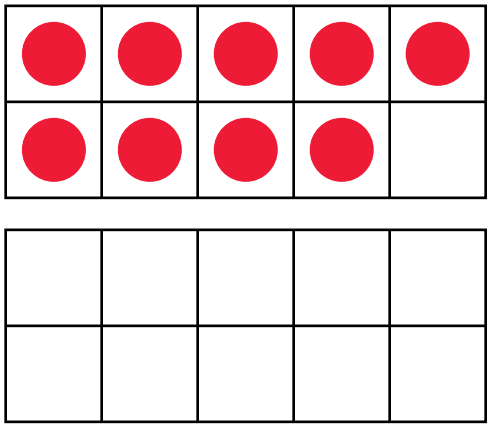
Solve problems 1–7.

1 13 stars are in the box.
Joy takes some stars.
9 stars are left.
How many stars does Joy take?



13 − _____ = 9 _____ stars

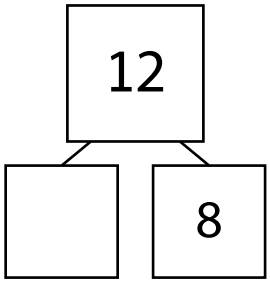
2 Find the missing number.



? + 9 = 16

_____ + 9 = 16

3 Find the missing number.
Complete the number bond.



12 = _____ + 8

	4	5	6	7	8	9	10	11	12	13	

4 Find the missing number.

$3 + 9 =$ _____

5 Find the missing number.

$15 - 6 =$ _____

6 Find the missing number.

$20 -$ _____ $= 10$

7 Find the missing number.

_____ $+ 6 = 14$

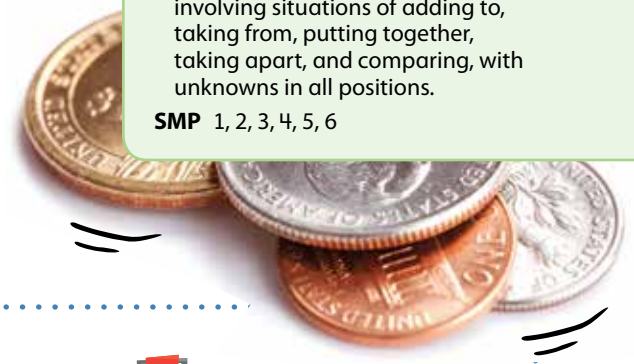
Explore Solving Word Problems to 20

Learning Target

- Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions.

SMP 1, 2, 3, 4, 5, 6

Rich has 3 coins.
He finds more coins in his pocket.
Now he has 8 coins.
How many does he find?



Try It

Math Toolkit

- counters

3 + _____ = 8

Rich found _____ coins.

Connect It

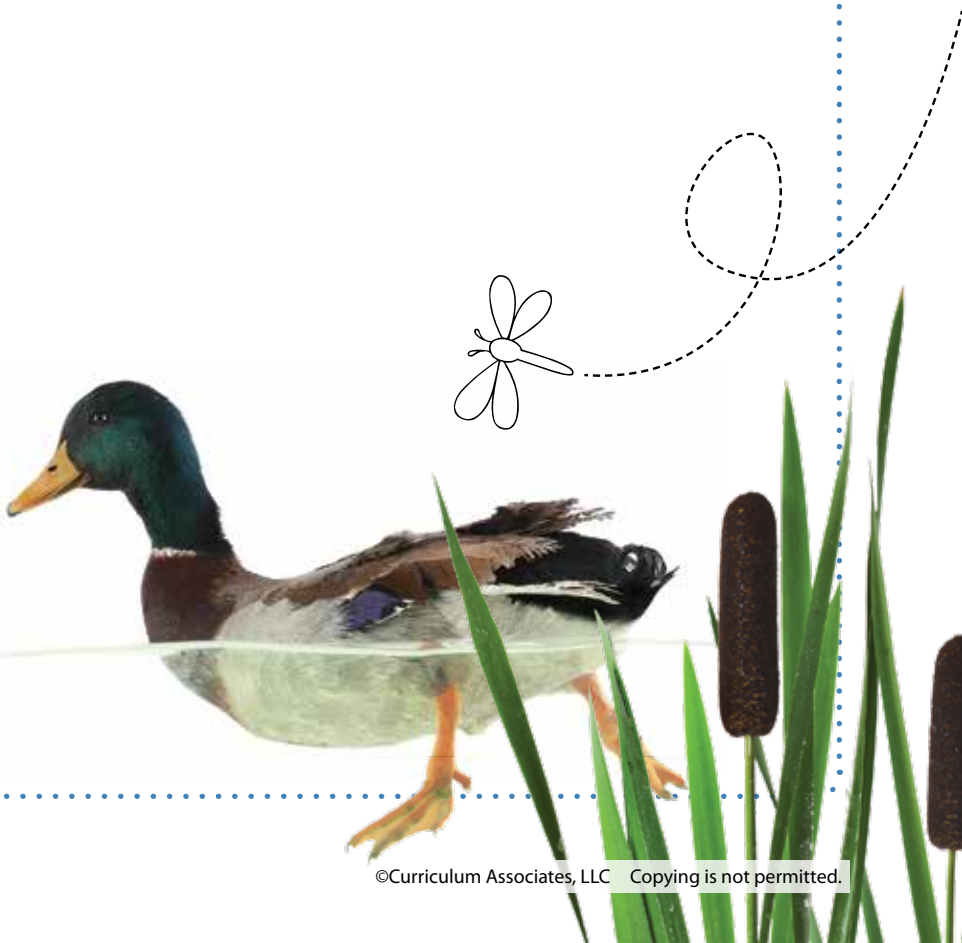
7 ducks swim in the pond.

3 fish swim in the pond.

How many fewer fish than ducks?

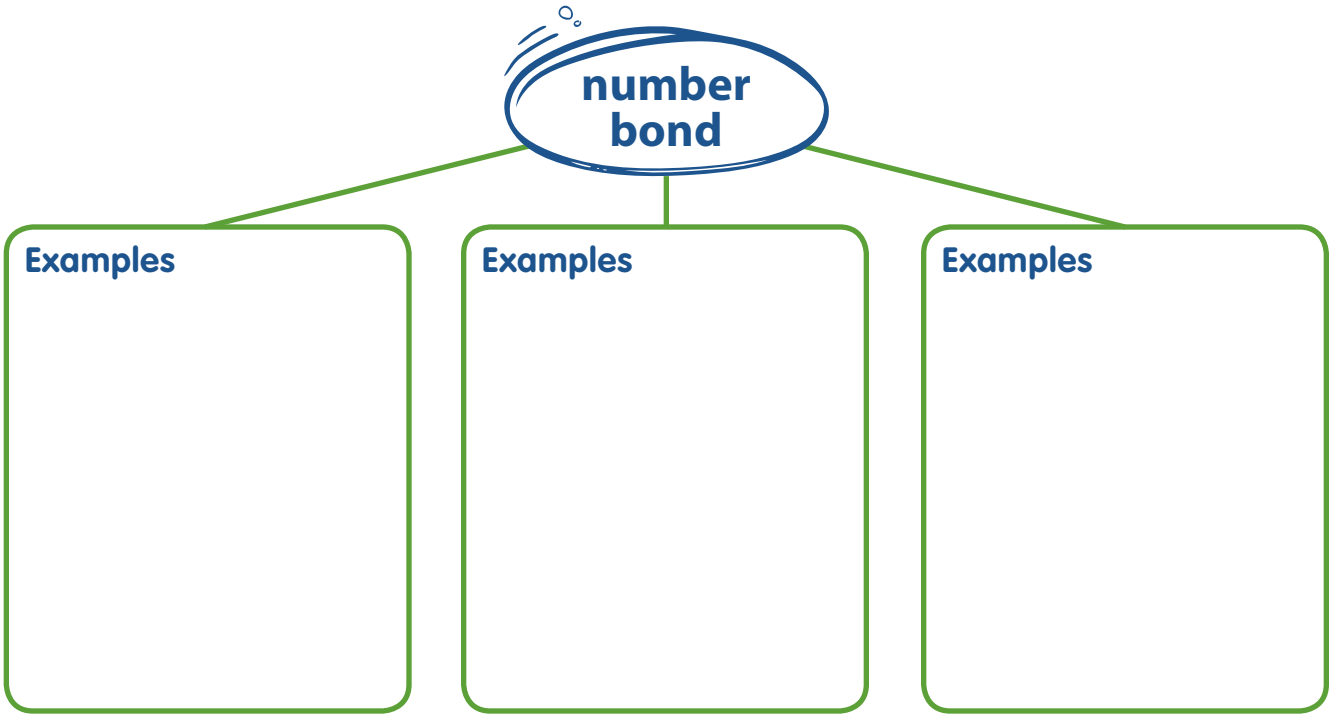
7 − 3 = _____

_____ fewer fish

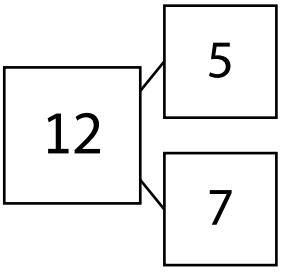


Prepare for Solving Word Problems to 20

1. Think about what you know about number bonds. Fill in each box. Use words, numbers, and pictures. Show as many ideas as you can.



2. Use the number bond to make up a word problem.



3 Solve the problem. Draw to show your work.

9 crows sit on a rail. 4 robins sit on a rail.
How many fewer robins than crows?

9 − 4 = _____

_____ fewer robins

Develop Solving Word Problems to 20

Jenny gets 15 prizes from the piñata. Ken gets 6 prizes from the piñata. How many fewer prizes does Ken get than Jenny?

Try It

Math Toolkit

- counters
- connecting cubes
- number paths
- number bonds
- 10-frames

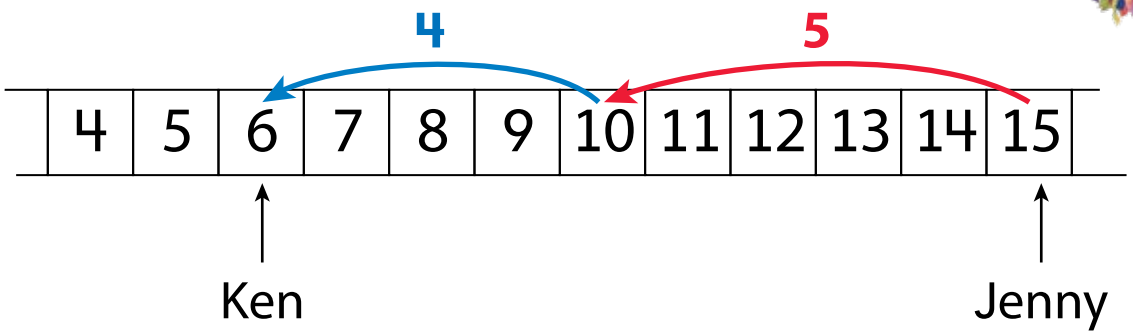
DISCUSS IT

Which subtraction strategy can help solve this problem?

Jenny gets 15 prizes from the piñata. Ken gets 6 prizes from the piñata. How many fewer prizes does Ken get than Jenny?

Model It

Solve 15 − ? = 6.



15 − _____ = 10

10 − _____ = 6

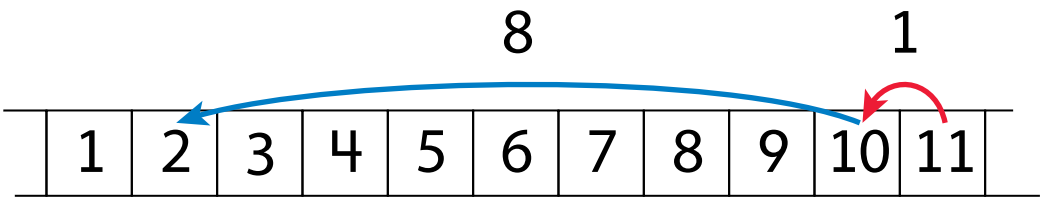
15 − _____ = 6

Ken gets _____ fewer prizes than Jenny.

Connect It

1 How is your way like **Model It**? How is it different?

2 Boom says 11 − 8 = 2. What did Boom do wrong?



Apply It

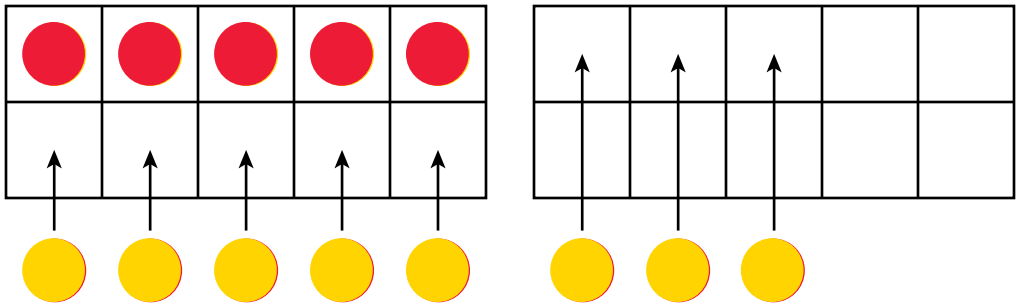
3 7 cats sleep in the box. More cats join them.
Now there are 11 cats. How many more cats join?

7 + _____ = 10

10 + _____ = 11

_____ cats join.

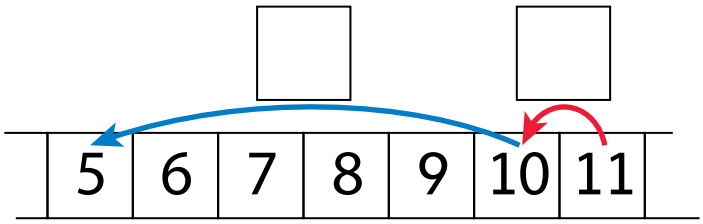
4 Some flowers are in Rina's garden.
Rina picks 8. Now there are 5 flowers.
How many flowers were in the garden to start?



5 + 8 = _____

_____ flowers

5 Aram has 11 crayons.
Aram has 6 more crayons than Ray.
How many crayons does Ray have?



11 − 6 = _____

_____ crayons

Practice Solving Word Problems to 20

Look at the Example. Then solve problems 1–4.

Example

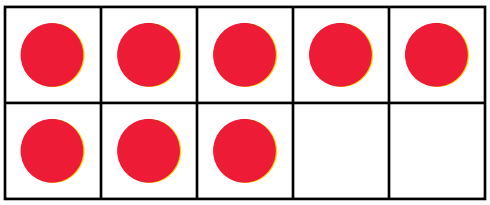
Mr. Piña has 18 snacks.

He has 9 bananas. The rest are apples. How many are apples?

9 are apples.

1 8 bottles have milk. 4 bottles have juice.

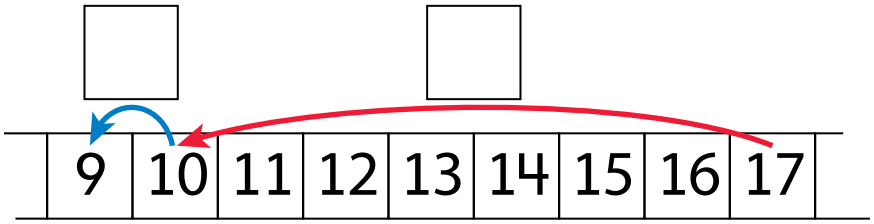
How many bottles in all?



8 + 4 = _____

_____ bottles

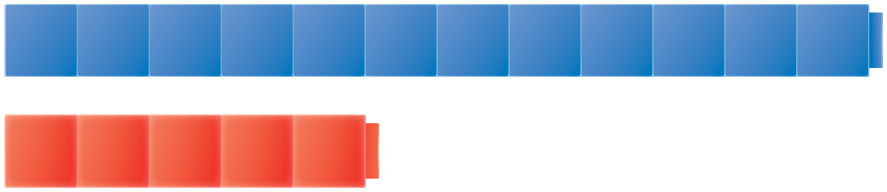
2 17 coloring pages are on the table.
Tanya colors some. There are 9 pages left.
How many pages does Tanya color?



17 − _____ = 9

_____ pages

3 Isabella has 12 balls. Ryan has 5 balls. How many fewer balls does Ryan have than Isabella?



12 − _____ = 5

_____ fewer balls

4 Sofia has 8 more marbles than Olaf. Olaf has 7 marbles. How many marbles does Sofia have?

7 + 8 = _____

_____ marbles

Develop Solving Word Problems to 20

Jody puts some lemons in a basket.
Matt puts 6 more lemons in the basket.
Now there are 14 lemons in the basket.
How many lemons does Jody put in?

Try It

Math Toolkit

- counters
- connecting cubes
- number paths
- number bonds
- 10-frames

DISCUSS IT

A subtraction equation that can help solve the problem is . . .

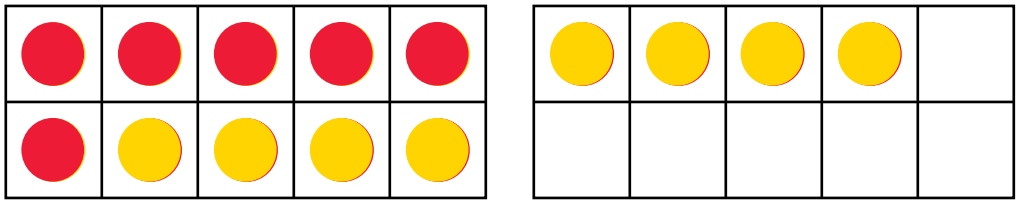
Jody puts some lemons in a basket.
Matt puts 6 more lemons in the basket.
Now there are 14 lemons in the basket.
How many lemons does Jody put in?

Model It

Solve ? + 6 = 14.

What number added to 6 equals 14?

? + 6 = 14 is the same as 6 + ? = 14.



6 + _____ = 14, so

_____ + 6 = 14.

Jody Matt

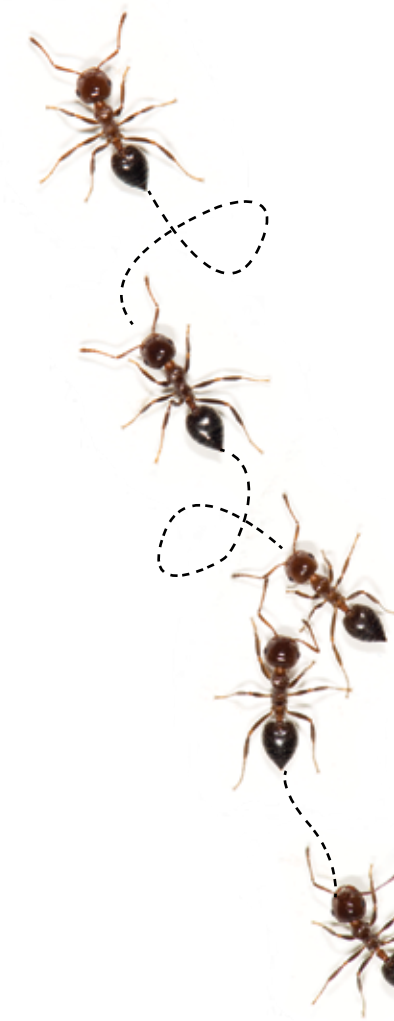
Jody puts in _____ lemons.

Connect It

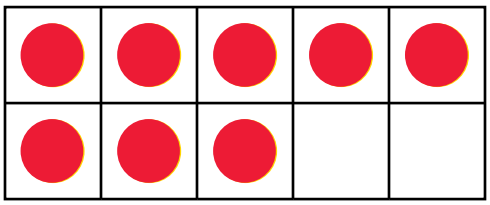
1. How is your way like **Model It**? How is it different?

2. How does making ten help you solve the problem?

Apply It



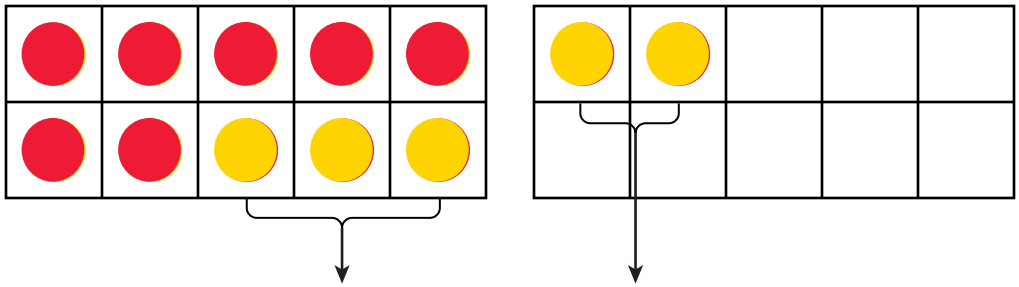
3. Some ants are at a picnic.
   8 more ants join them. Now there are 15 ants.
   How many ants were at the picnic to start?



_____ + 8 = 15

_____ ants

4 Janice has 12 blocks. She gives some to Pat.
Now she has 7 blocks.
How many does Janice give to Pat?



12 − _____ = _____

_____ blocks

5 Mr. Peters has 2 fewer desks than Mr. Dans.
Mr. Dans has 11 desks.
How many desks does Mr. Peters have?

_____ − _____ = _____

_____ desks

Practice Solving Word Problems to 20

Look at the Example. Then solve problems 1–4.

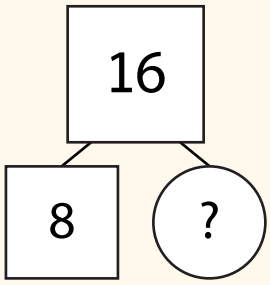
Example

Sasha has 16 erasers.

8 are square. The rest are round.

How many erasers are round?

8



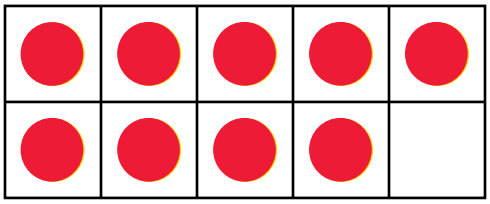
8 + 8 = 16

8 erasers are round.

1 5 children dance on stage.

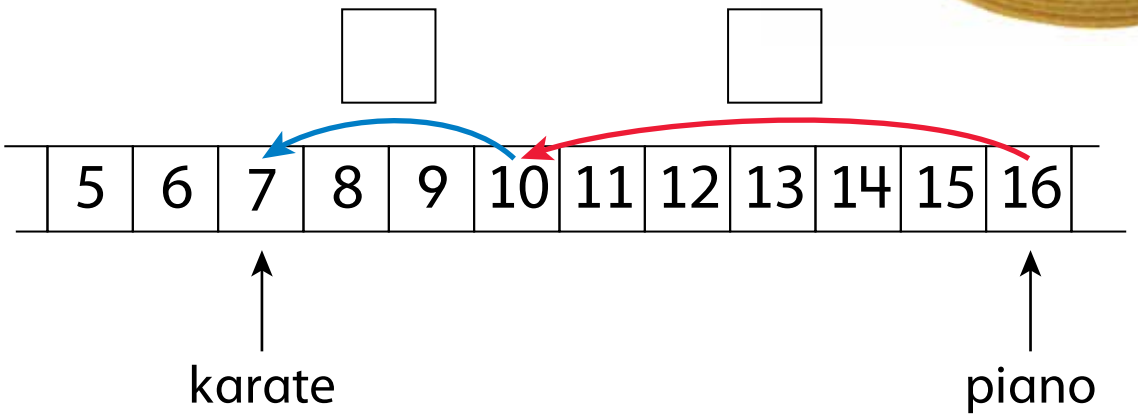
9 more children join them.

How many children are dancing now?



_____ + _____ = _____ _____ children

2 7 friends do karate.
16 friends play piano.
How many fewer friends do karate?



16 − 7 = _____ _____ fewer friends

3 9 large books and 7 small books are on the shelf.
How many books are there in all?

9 + 7 = _____ _____ books

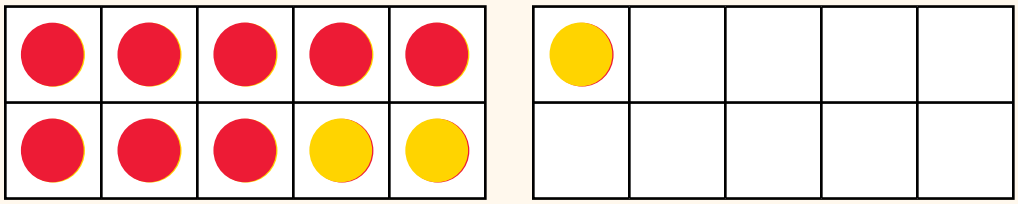
4 12 eggs are in a carton.
4 are brown. The rest are white.
How many eggs are white?

_____ − _____ = _____ _____ eggs

Refine Solving Word Problems to 20

Complete the Example. Then solve problems 1–4.

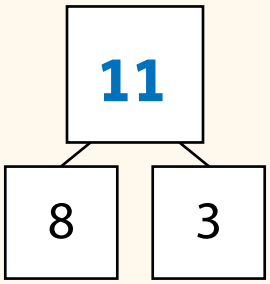
Example Some hamsters are in a cage.
Josef lets 3 out. Now there are 8 in the cage.
How many were in the cage to start?



$8 + 3 = 11$

11 $- 3 = 8$

_____ hamsters

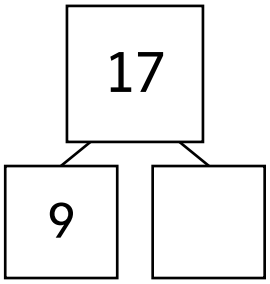


Apply It

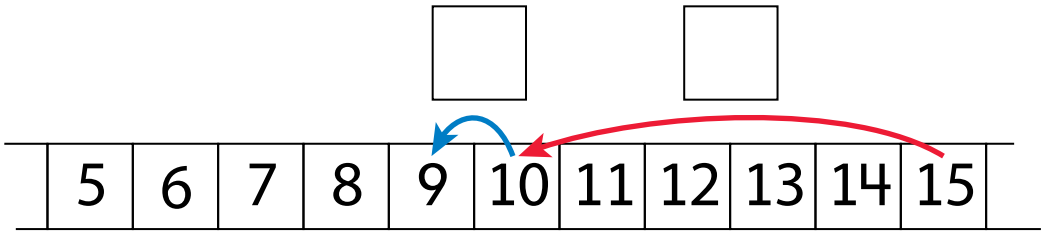
1 17 soccer balls are on the field.
Asher kicks 9 of them away.
How many soccer balls are there now?

$17 - 9 =$ _____

_____ soccer balls



2 Barry has 15 pet rocks. Don has 9 pet rocks.
How many more rocks does Barry have?



15 − _____ = _____ _____ more rocks

3 10 red shoes are on the floor.
10 pink shoes are on the floor.
How many shoes in all?

_____ shoes

4 14 birds sit on a fence.
Some birds fly away. Now there are 5.
How many birds fly away?

_____ birds fly away.

Practice Solving Word Problems to 20

Look at the Example. Then solve problems 1–4.

Example

13 children are on the baseball team.

5 are boys. The rest are girls.

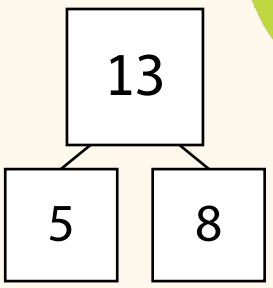
How many girls on the team?

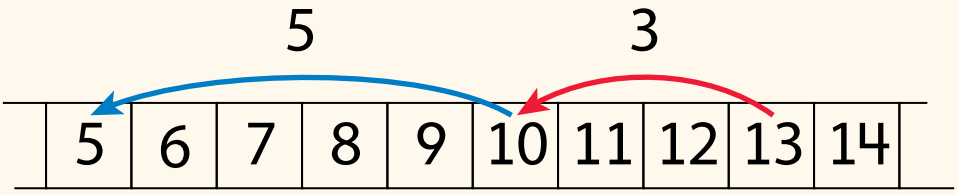
$13 - 3 = 10$

$10 - 5 = 5$

$13 - 8 = 5$

8 girls

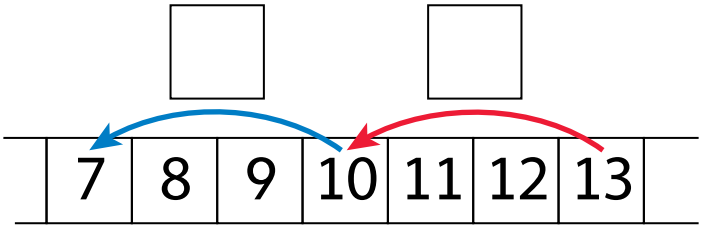


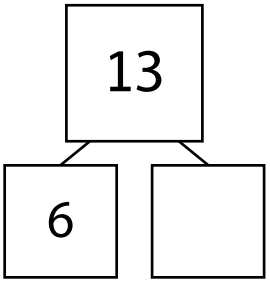


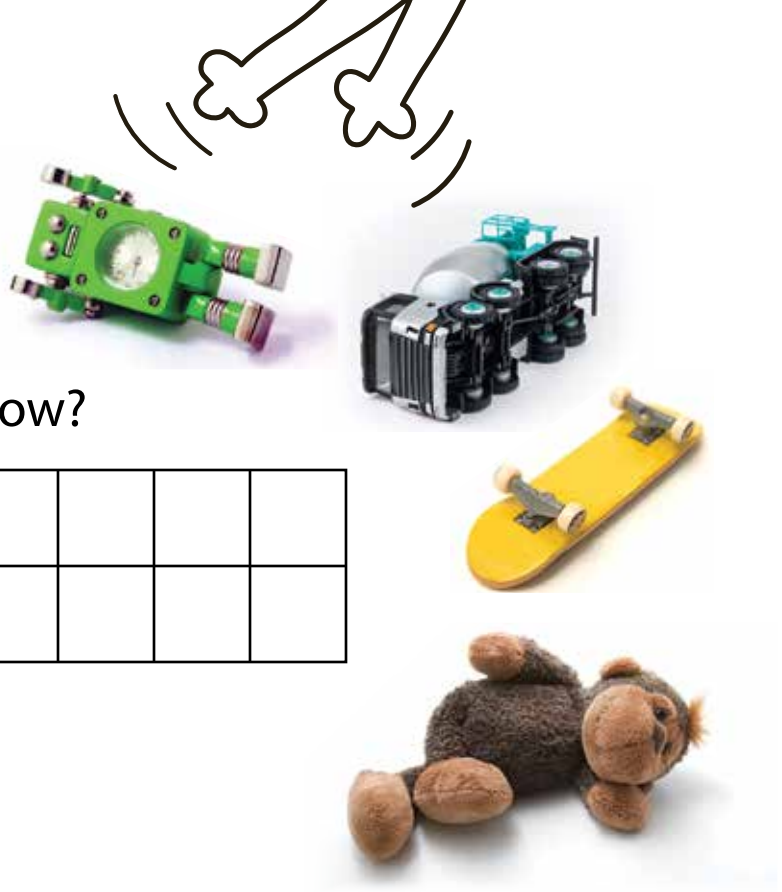
1 Ron has 13 pens. Brianna has 6 fewer pens than Ron. How many pens does Brianna have?

$13 - 6 =$ _____

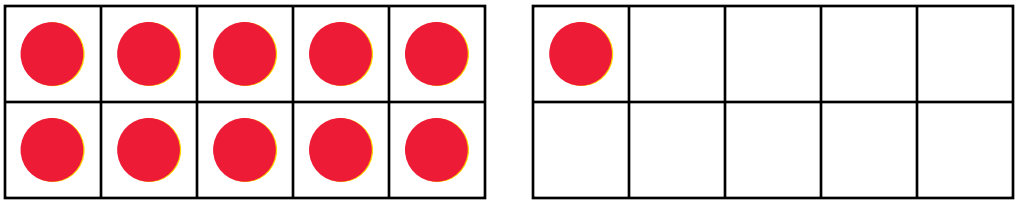
_____ pens







2 11 toys are on the shelf.
The cat pushes off 4 toys.
How many toys on the shelf now?



_____ – _____ = _____

_____ toys

3 11 star stickers are in the box.
8 rainbow stickers are in the box.
How many fewer rainbow stickers?

_____ fewer rainbow stickers

4 Stanley has 7 more fish than Bob.
Stanley has 12 fish.
How many fish does Bob have?

_____ fish

Refine Solving Word Problems to 20

Apply It

Solve problems 1–6.

1. Fido has 6 more spots than Pup.
   Pup has 6 spots.
   How many spots does Fido have?

   ____ + ____ = ____

	6	7	8	9	10	11	12	13	

   ____ spots

2. Tara sings 5 fewer songs than Danny.
   Danny sings 11 songs.
   How many songs does Tara sing?

   ____ − ____ = ____

   ____ songs

3. 6 berries are in the bowl.
   Amal puts 8 more in the bowl.
   How many berries are there now?

   ____ + ____ = ____ ____ berries

4 Kris has 8 toy planes. He makes more. Now he has 12 toy planes. How many more does Kris make?

_____ more toy planes

5 Paul has 9 fewer coins than Hasina.
Paul has 6 coins.
How many coins does Hasina have?

_____ coins

6 20 tennis balls are on the table.
Some roll off. Now there are 10.
How many roll off?

_____ tennis balls