

Eureka Math

1st Grade Module 2 Lesson 16

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Icons



Read, Draw, Write



Learning Target



Personal White Board



Problem Set



Manipulatives Needed



Fluency



Think Pair Share



Whole Class



Individual



Partner



Small Group



Small Group Time



Materials Needed

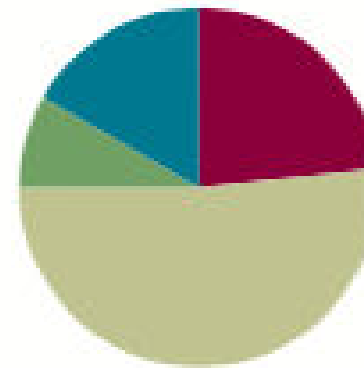
- (S) Personal white board
- (S) 5-group row insert (Lesson 12 Fluency Template 2)

Lesson 16

Objective: Relate counting on to making ten and taking from ten.

Suggested Lesson Structure

■ Fluency Practice	(14 minutes)
■ Application Problem	(5 minutes)
■ Concept Development	(31 minutes)
■ Student Debrief	(10 minutes)
Total Time	(60 minutes)



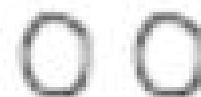
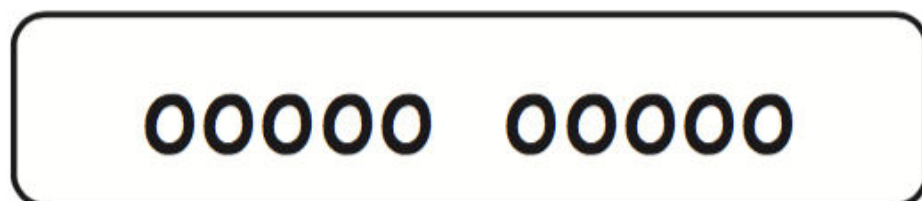


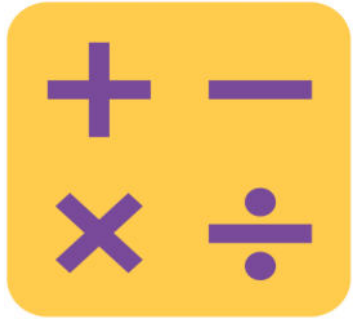
I can relate counting on to making ten
and taking from ten.



Subtract 9

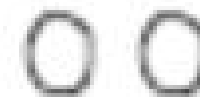
Look at your 5-group row insert. Draw more circles to the right of your 5-group to show a total of 12.





Subtract 9

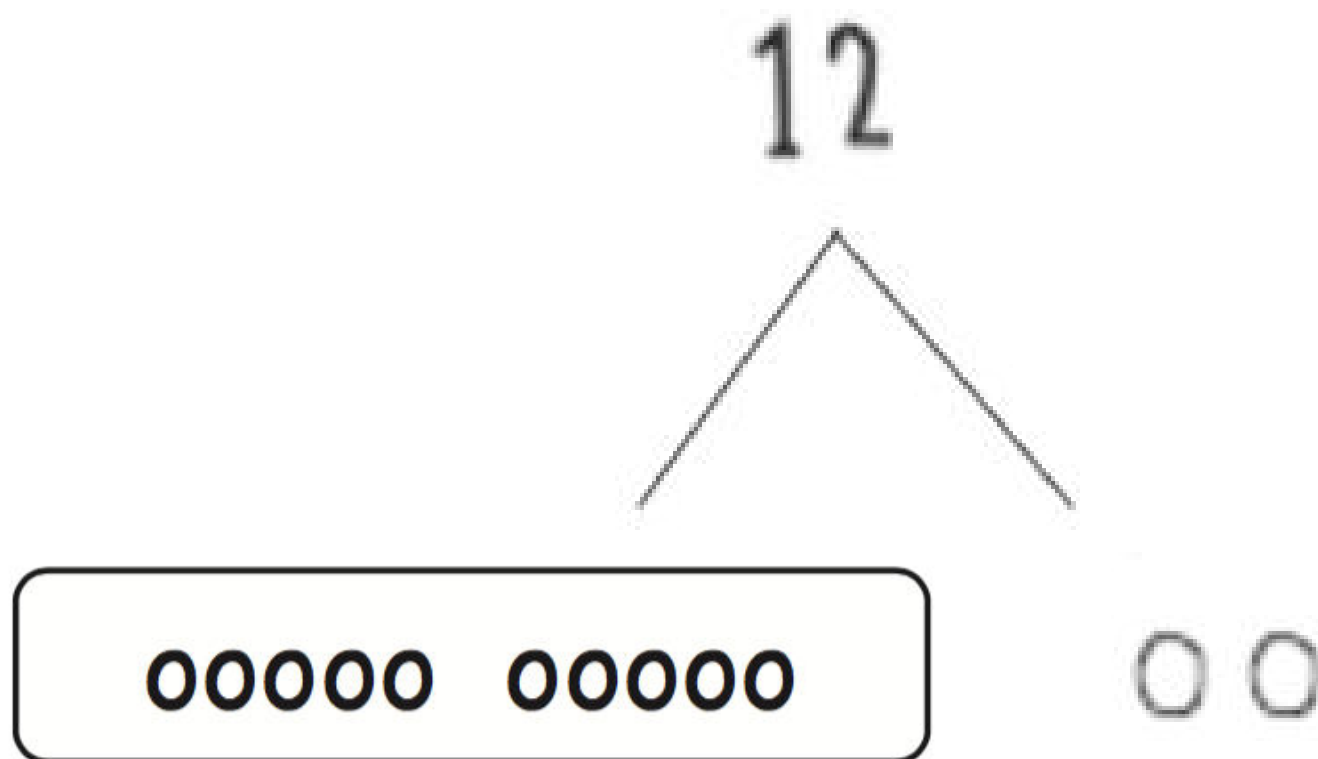
Say 12 as a number bond, with 10 as a part.





Subtract 9

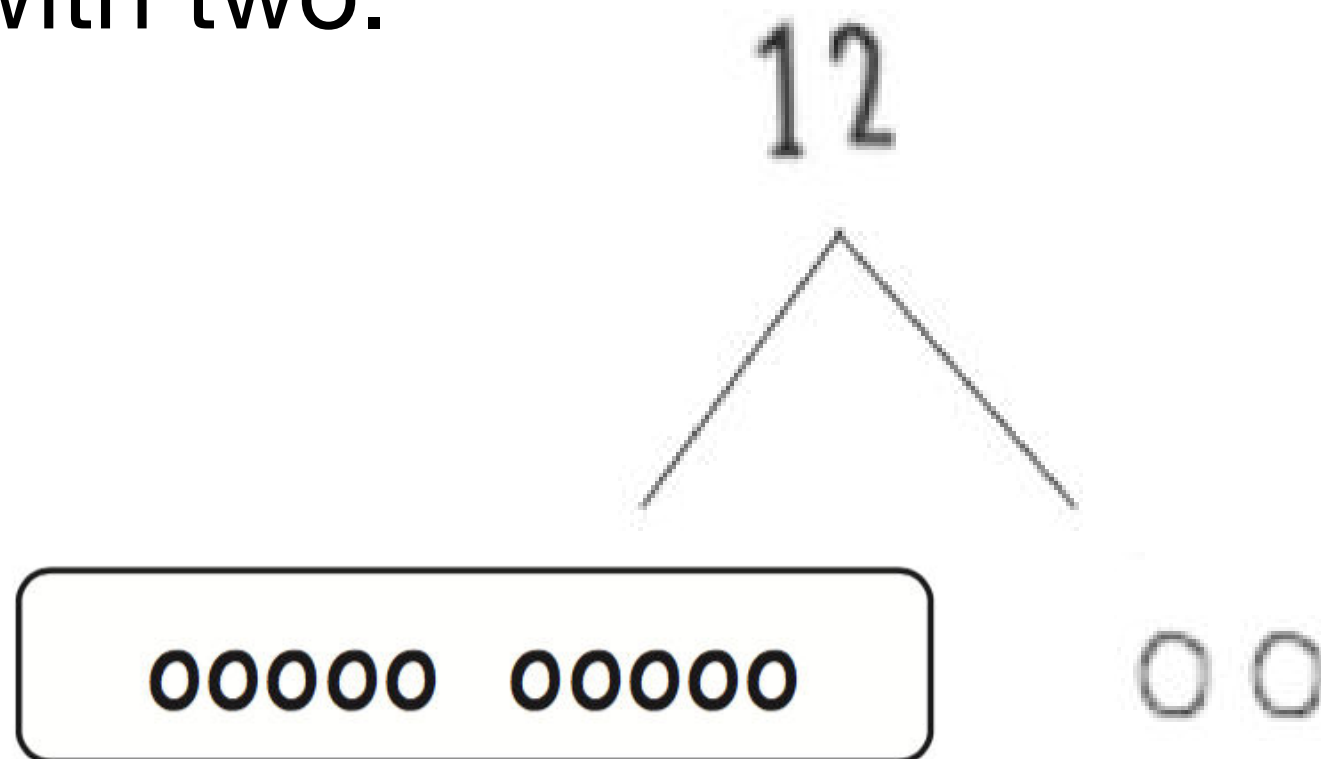
Turn your circles into a number bond.





Subtract 9

Show me $12 - 9$. Think about whether you should subtract from the part with ten or the part with two.

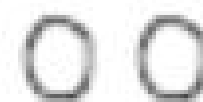
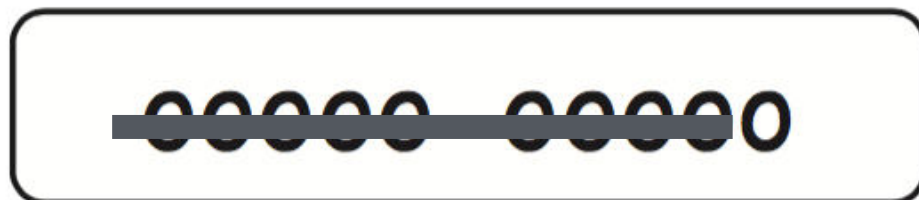




Subtract 9

Below your circles, write an addition sentence to show what is left.

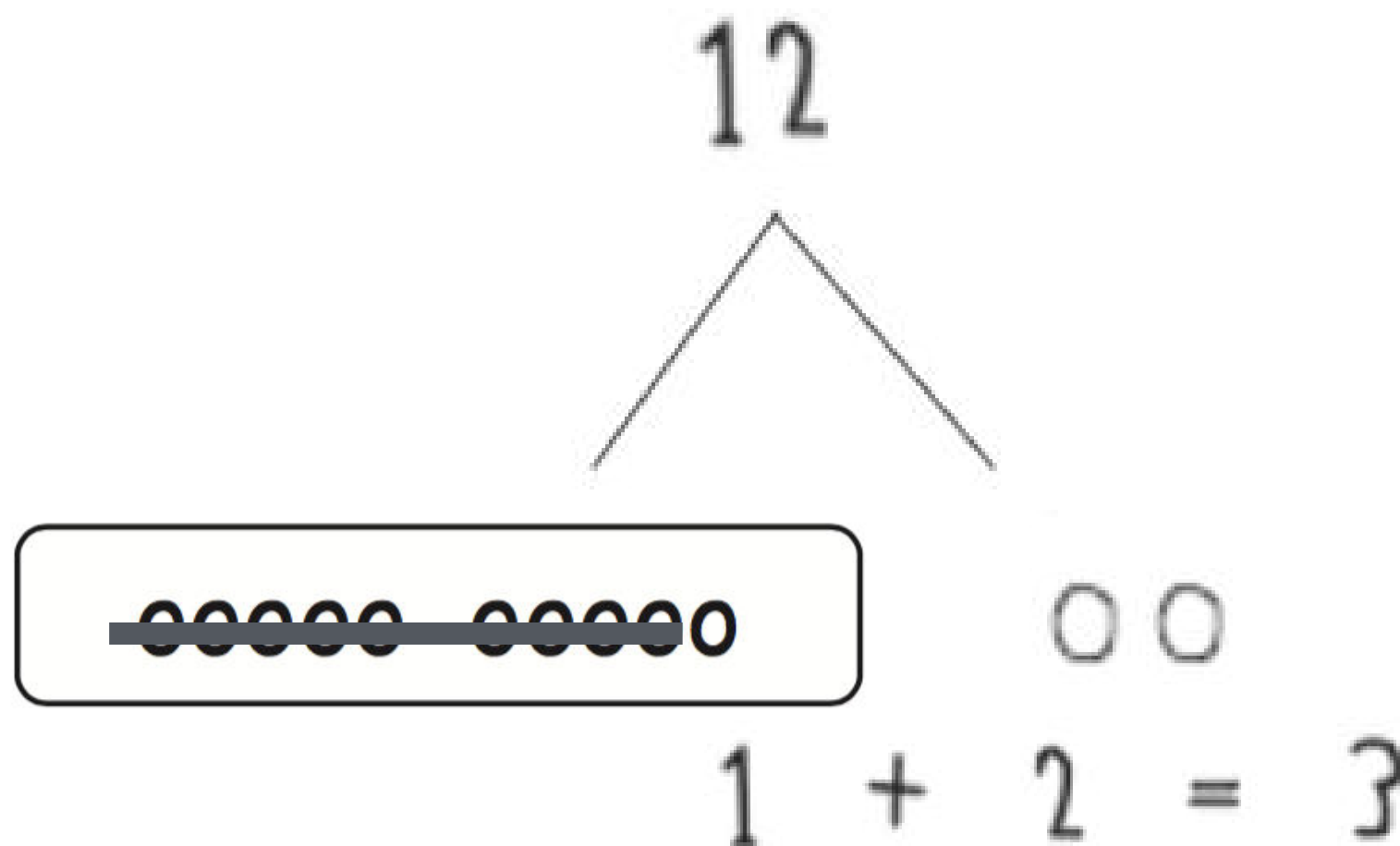
12





Subtract 9

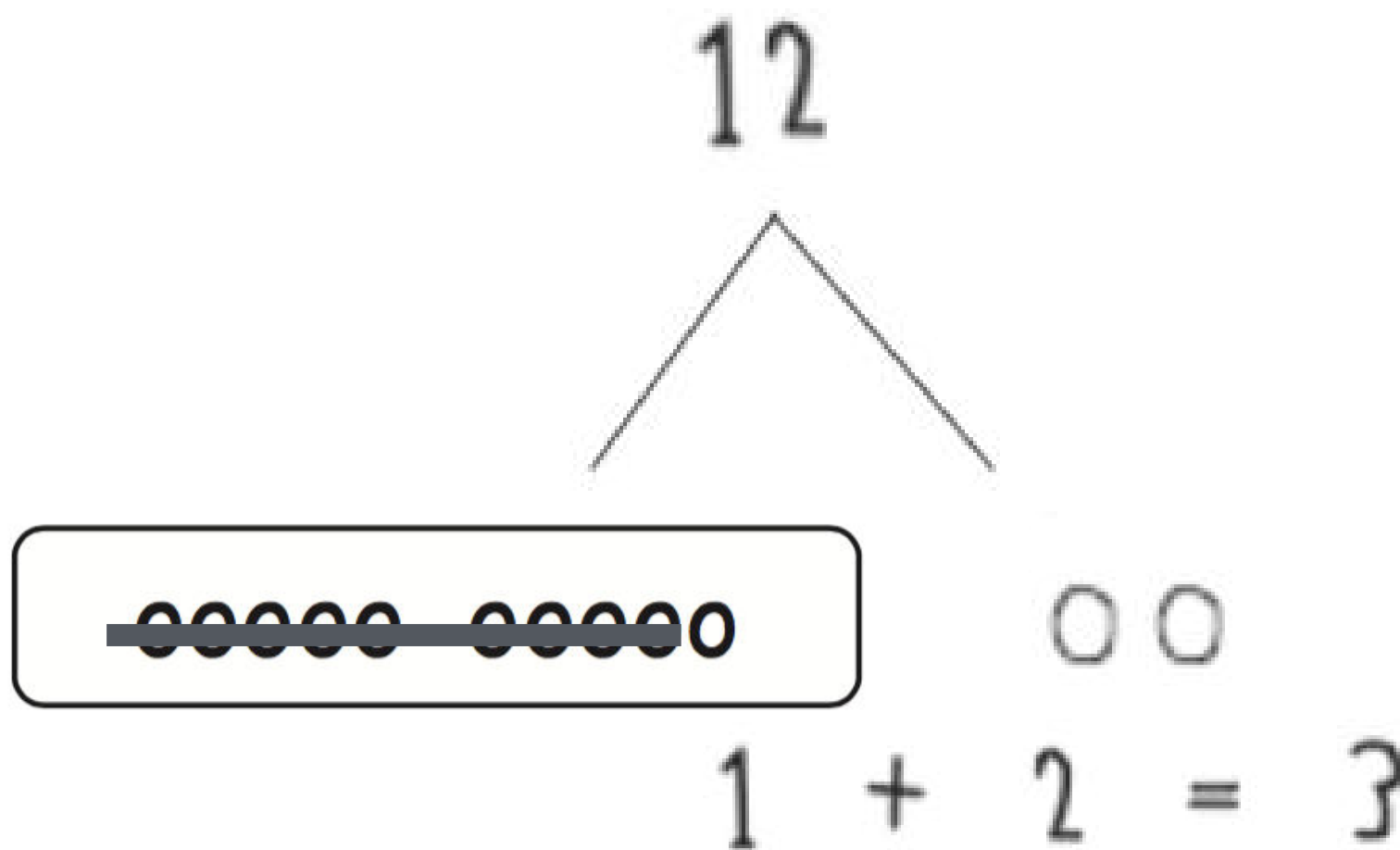
What is $12 - 9$?





Subtract 9

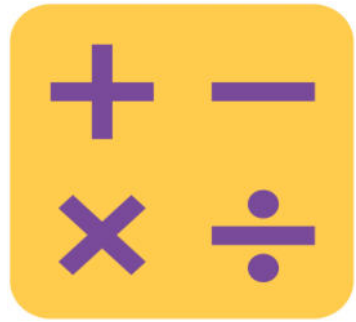
12-9 is 3!





Subtract 9

Let's practice more!



5-Group Flash: 5 Less and 4 Less

I will flash you a 5-group row card. You tell me the number that is 5 or 4 less!



Happy Counting by Twos: Odd Numbers

Let's play Happy Counting! We're going to count by 2's from 1 to 19 and back.

When I hold my hand like this (point thumb and motion up), I want you to count **up**.



If I put my hand like this (point thumb and motion down), I want you to count **down**.



If I do this (thumb to the side) that means **stop**, but try hard to remember the last number you said.





Application Problem

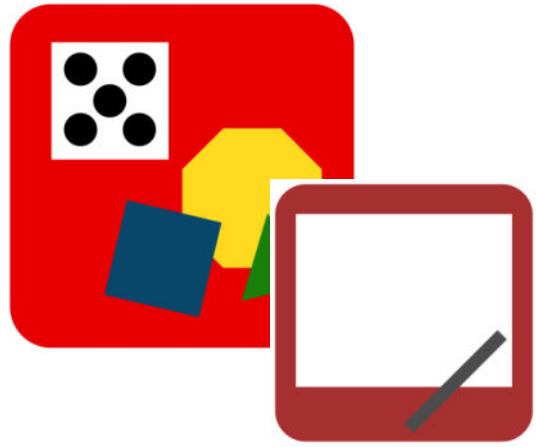
There were 16 coats on the rack.
Nine students took their coats to
go outside. How many coats
were still on the rack?



Concept Development

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

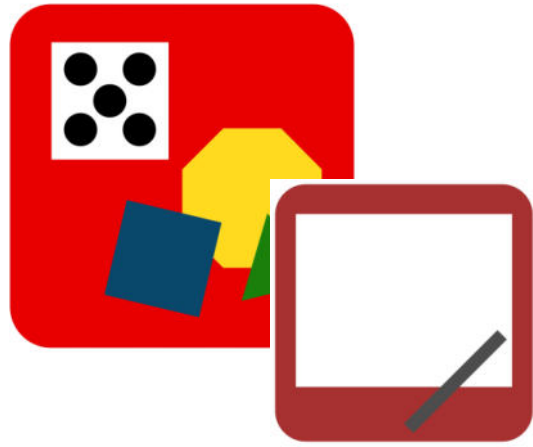
Solve $11 - 9$ on your personal white board.



Concept Development

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

I heard someone share this strategy: I started with 9 and counted on. Niiine, 10, 11. Two fingers are up.



Concept Development

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

Let's all try counting on!



Concept Development

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

I also heard someone share this strategy: I took 9 from 10 and did $1+1$ and got 2.



Concept Development

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

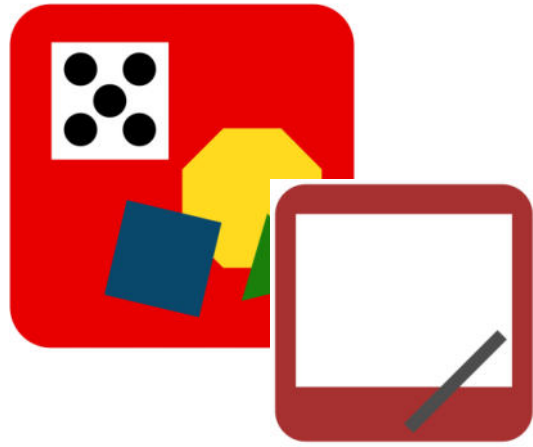
Let's all use the take from ten strategy to solve on our personal white boards!



Concept Development

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

What did you do?



Concept Development

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

10-9 is 1

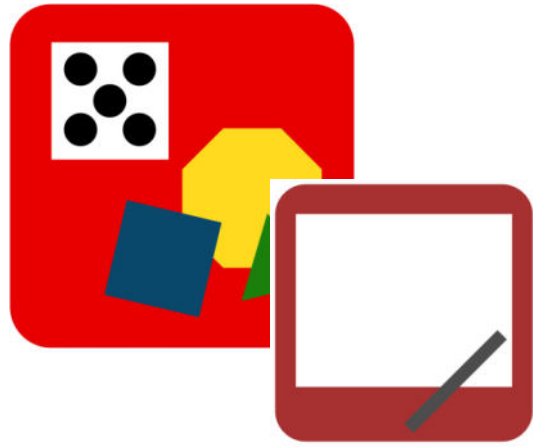
1+1 2.



Concept Development

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

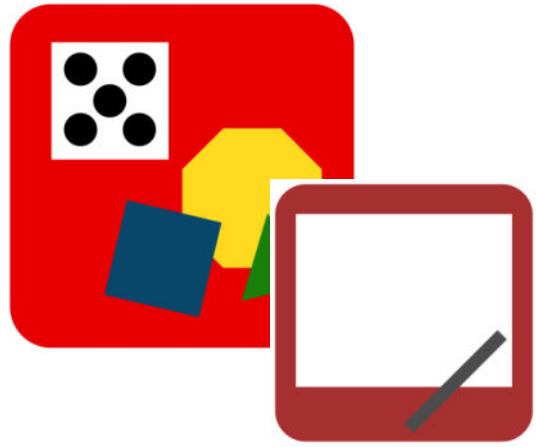
Everyone, let's use the take from ten strategy using our fingers to check! Start by showing 11 fingers.



Concept Development

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

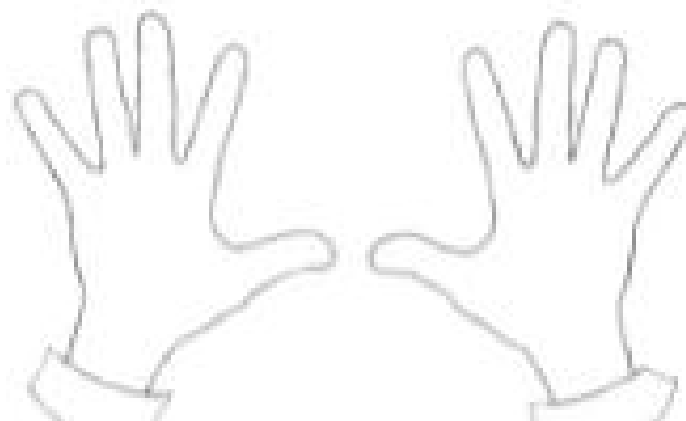
Oh no! We can't! We only have 10 fingers!



Concept Development

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

Oh boy. We can't quite do that, can we? We'll just have to use our imaginations. First, put up your 10 fingers.

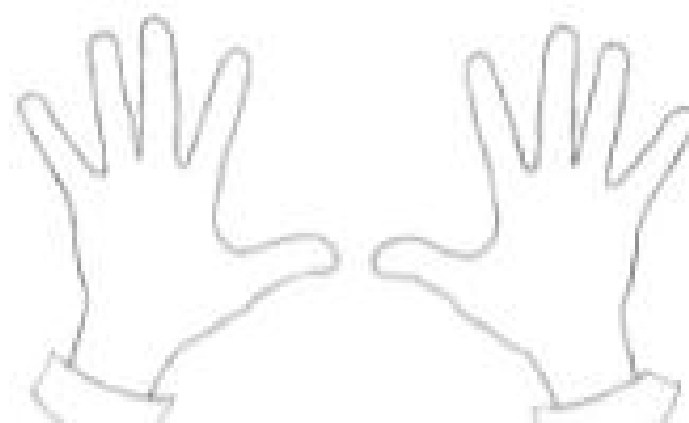


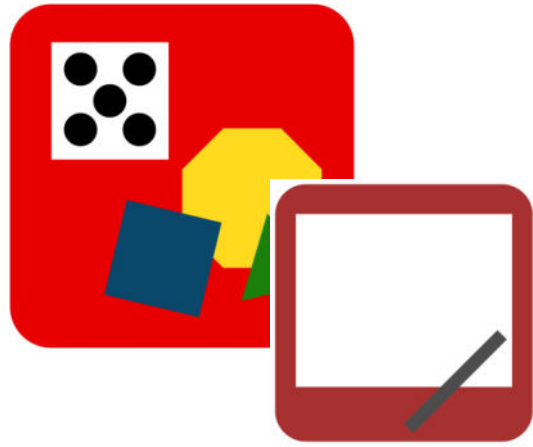


Concept Development

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

How many more fingers do we need to imagine?

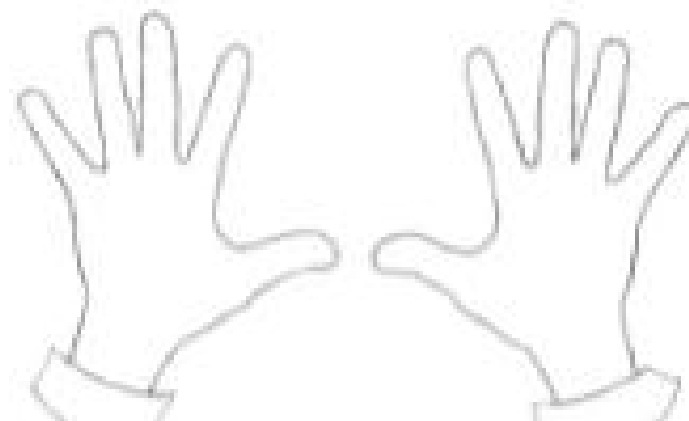


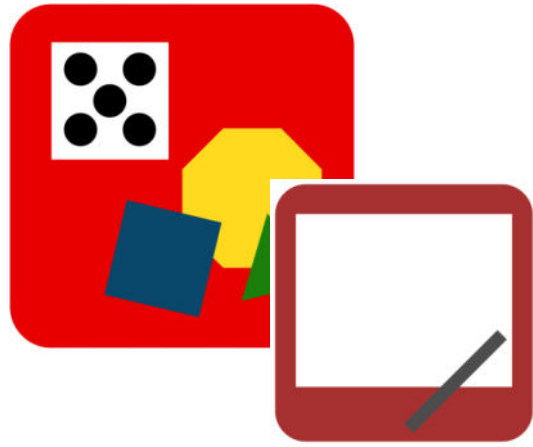


Concept Development

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

We need to imagine 1 more finger!



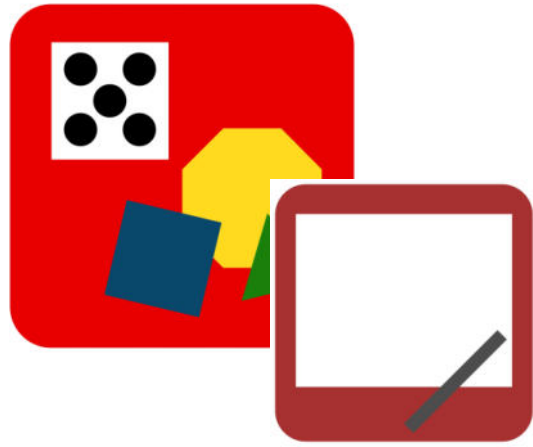


Concept Development

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

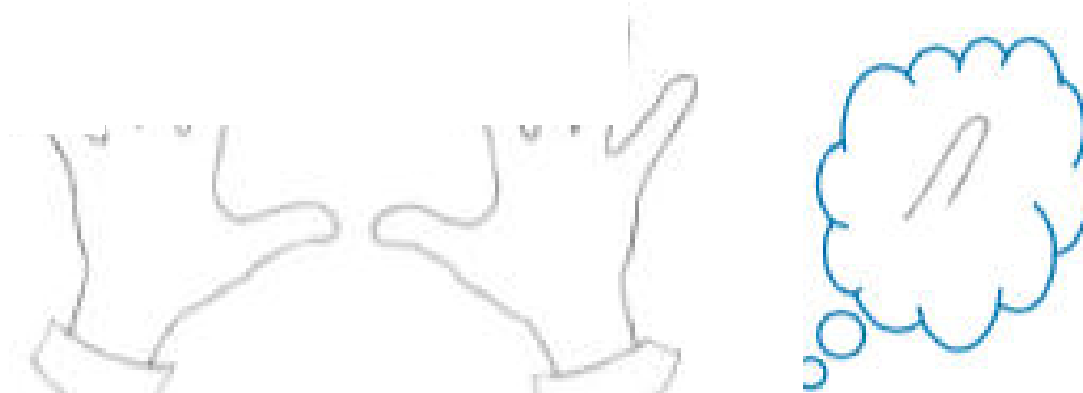
Visualize, or picture in your mind, 1 more finger next to your 10. Now, take away 9, all at once.

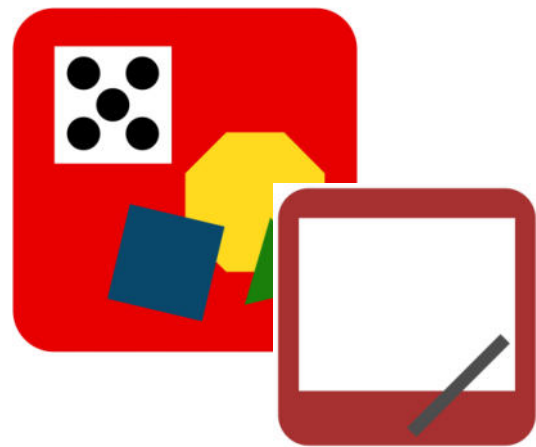




Concept Development

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

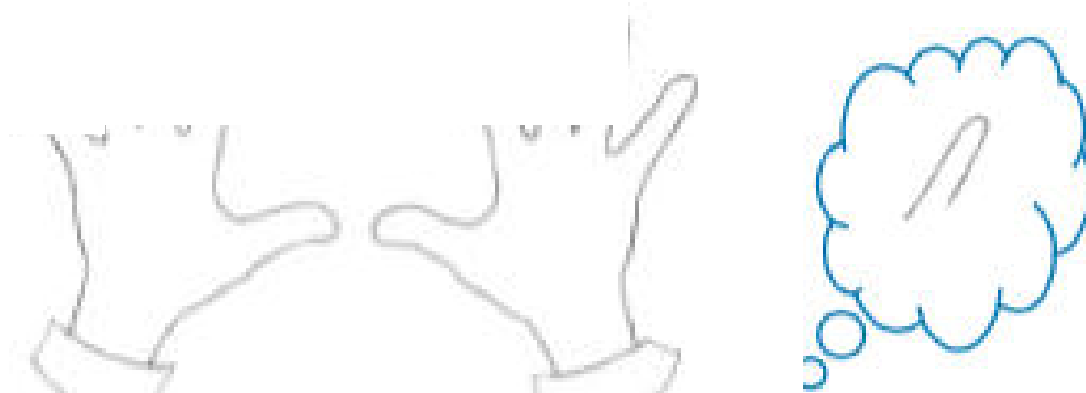


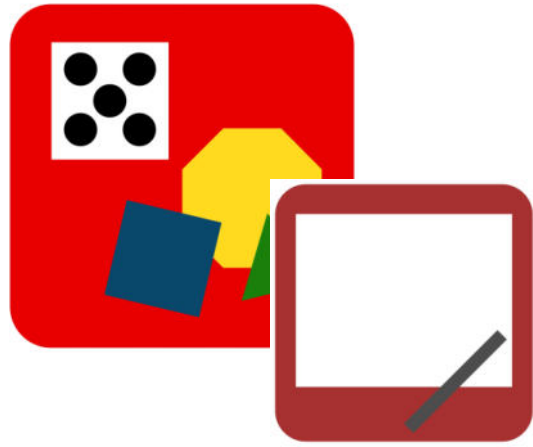


Concept Development

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

How many real fingers do you have up?

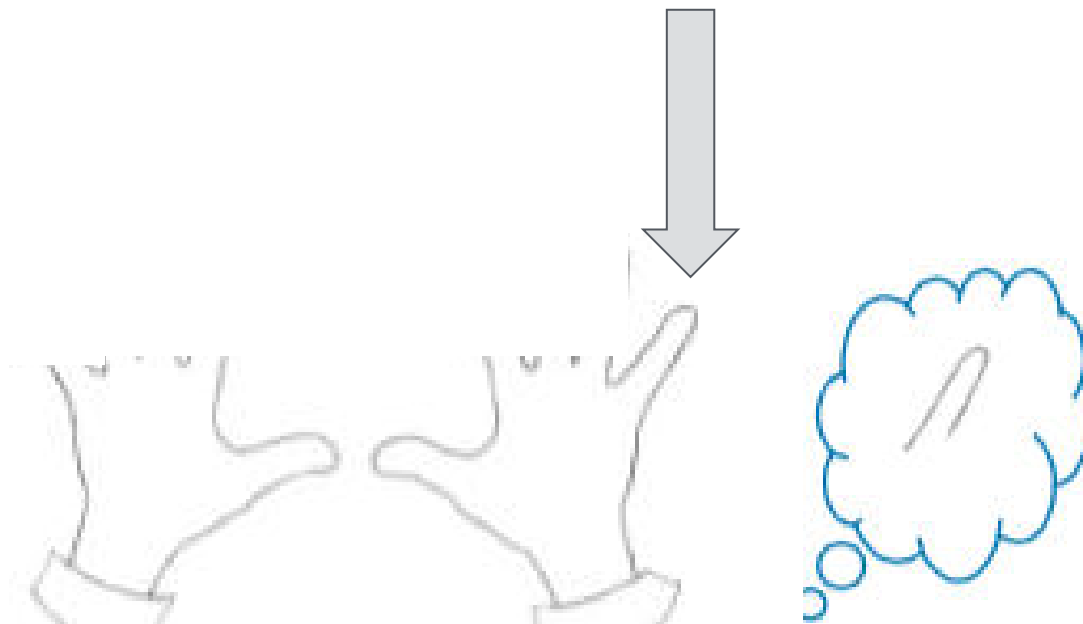


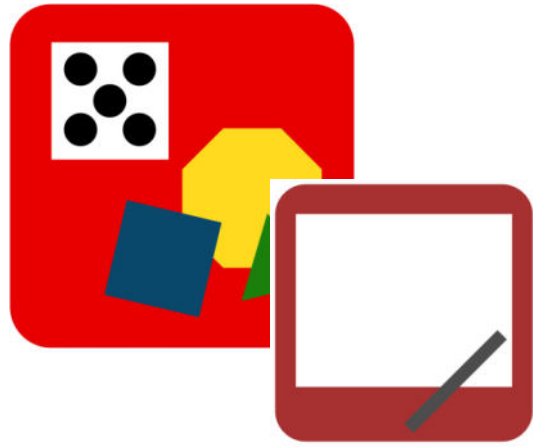


Concept Development

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

There is 1 real finger still up!

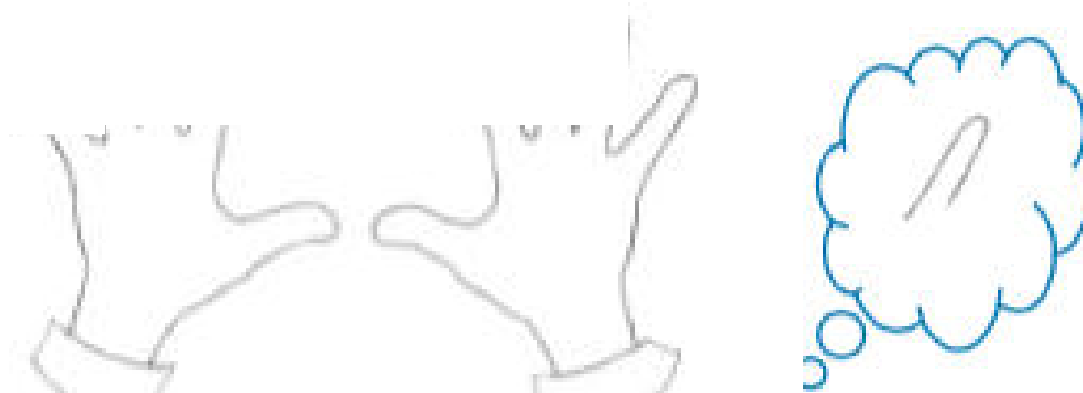


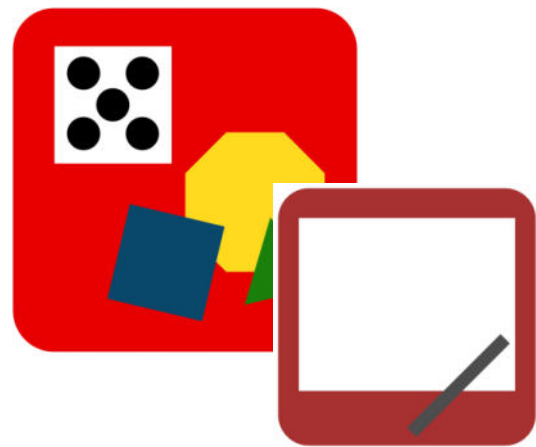


Concept Development

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

How many pretend fingers are still up?

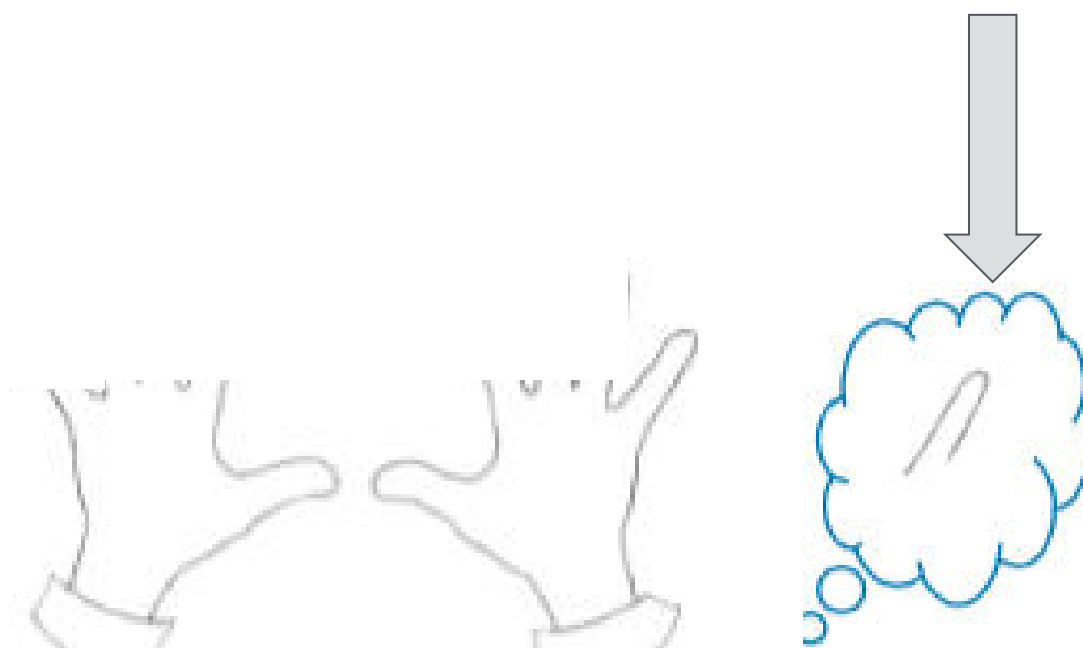




Concept Development

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

There is 1 pretend finger still up!

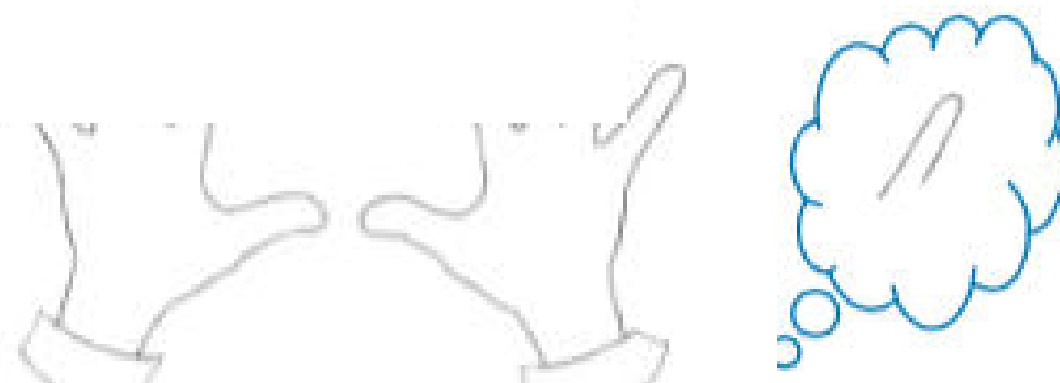


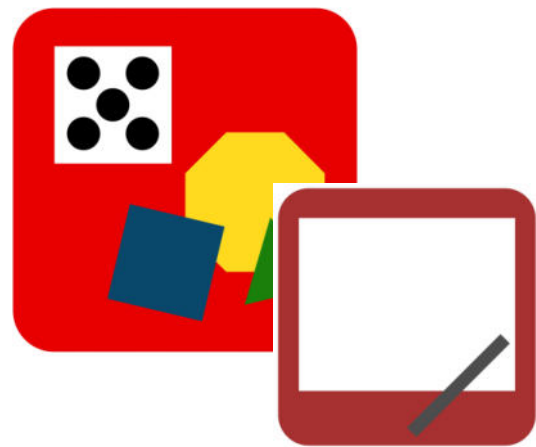


Concept Development

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

So, how many fingers are there altogether, including pretend fingers? Let's count. Nod your head when you count your pretend fingers so we are sure we counted them.

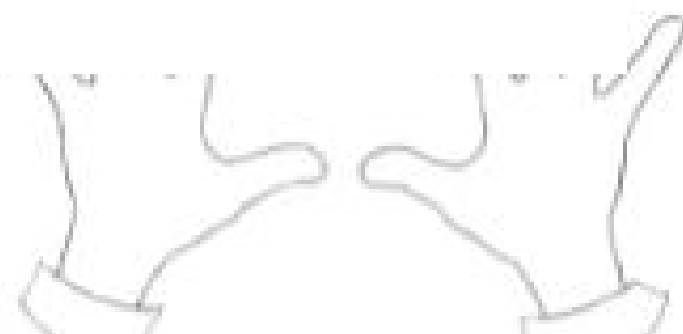




Concept Development

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

What is 11-9?

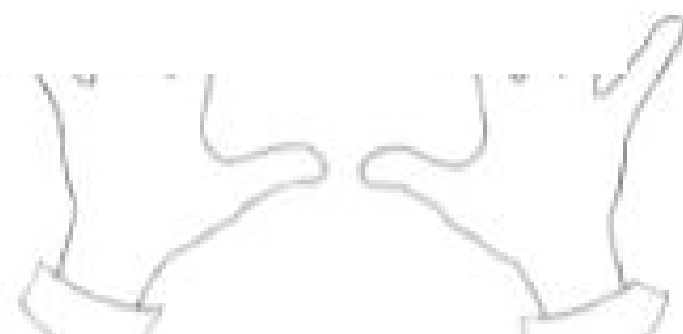


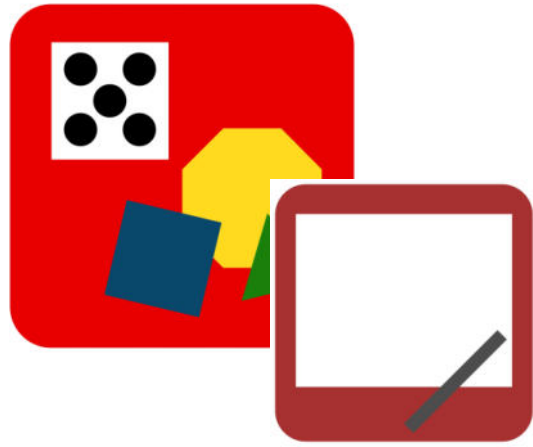


Concept Development

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

What is 11-9?

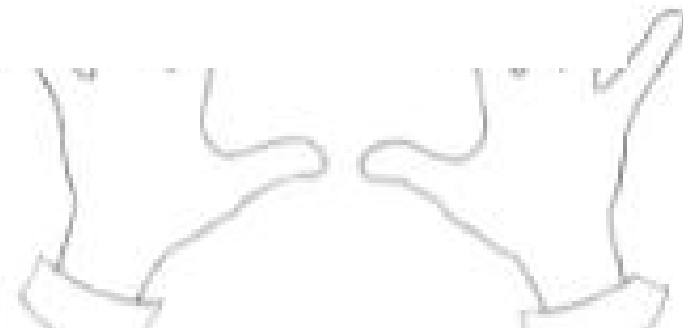


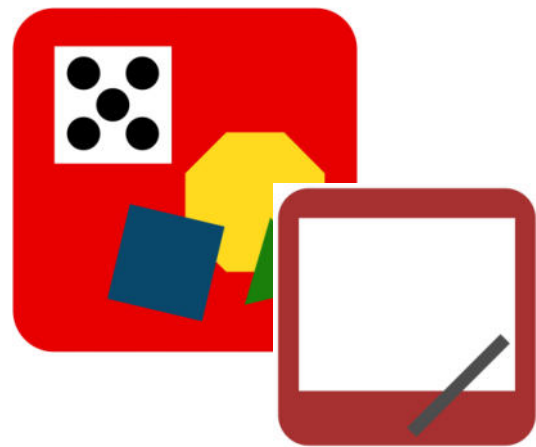


Concept Development

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

11-9 is 2!

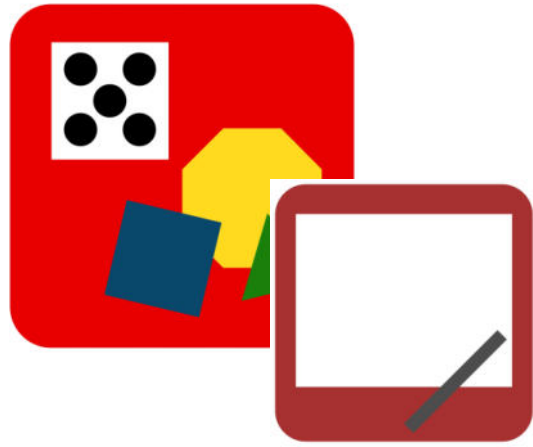




Concept Development

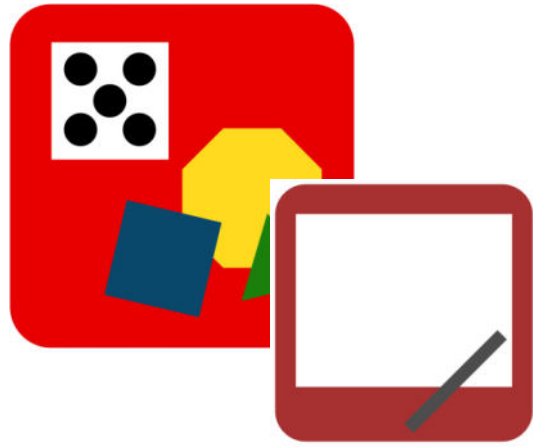
$$11 - 9 = \underline{\hspace{2cm}}$$

Which strategy was easier for you--counting on or using imaginary fingers? Turn and talk to your partner.



Concept Development

Let's try more!



Concept Development

$$17 - 9$$

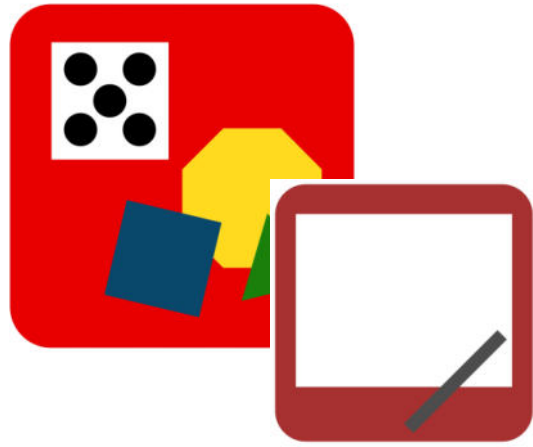
Use both counting on and taking from 10 with imaginary fingers to solve this!



Concept Development

$$15 - 9$$

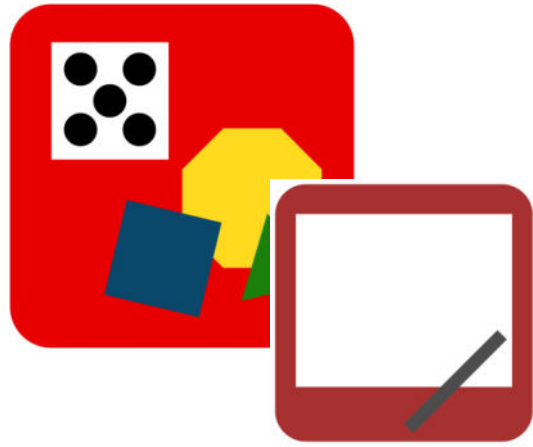
Use both counting on and taking from 10 with imaginary fingers to solve this!



Concept Development

$$12 - 9$$

Use both counting on and taking from 10 with imaginary fingers to solve this!



Concept Development

$$14 - 9$$

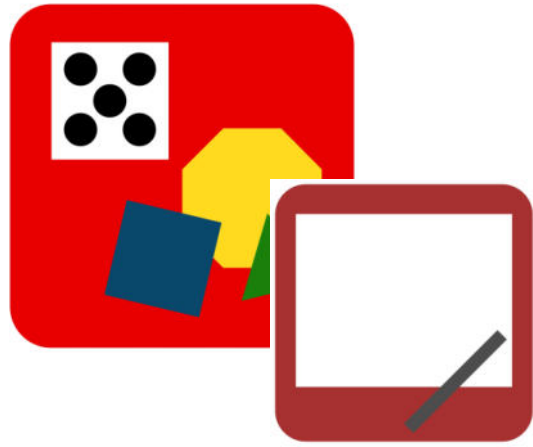
Let's try $14 - 9$. Show 10 fingers, and imagine 4 more.



Concept Development

$$14 - 9$$

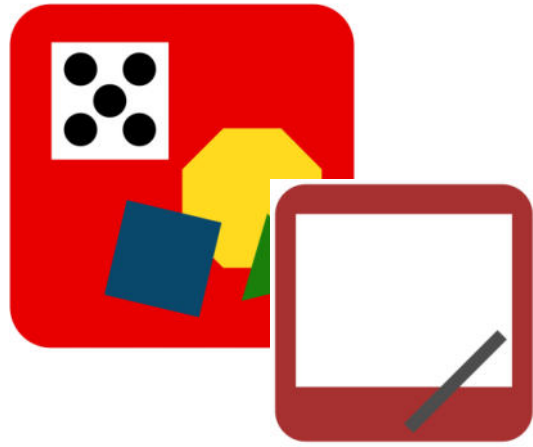
Let's try $14 - 9$. Show 10 fingers, and imagine 4 more.



Concept Development

$$14 - 9$$

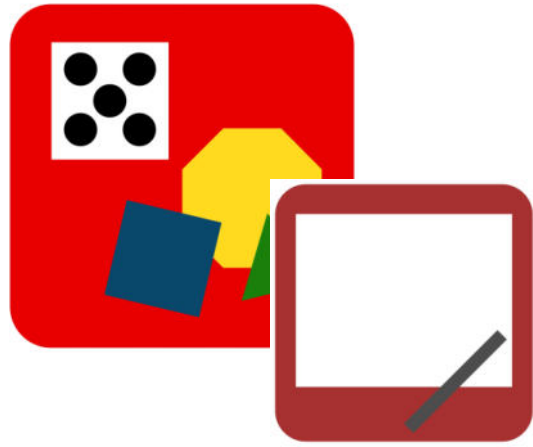
Now, take away 9, all at once. How many real fingers do you have up?



Concept Development

$$14 - 9$$

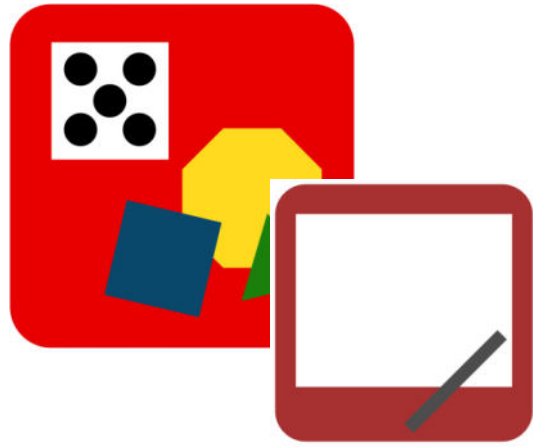
We have 1 real finger still up! How many pretend fingers are still up?



Concept Development

$$14 - 9$$

We have 4 pretend fingers till up!



Concept Development

$$14 - 9$$

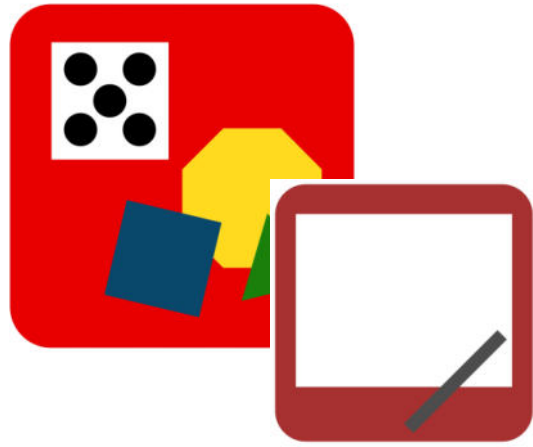
Instead of nodding our heads 4 times to count on, can you see how many fingers there are altogether?



Concept Development

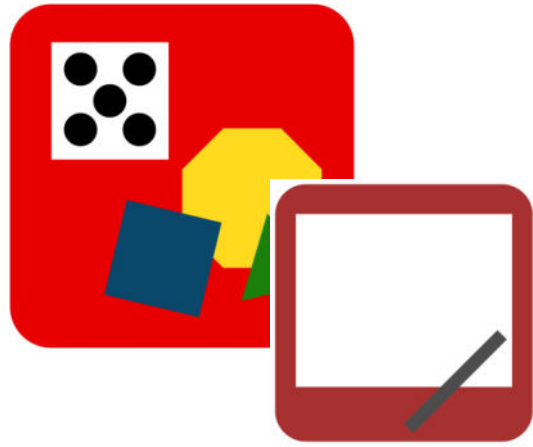
$$14 - 9$$

Yes. We can just add 1 and 4. That's 5!



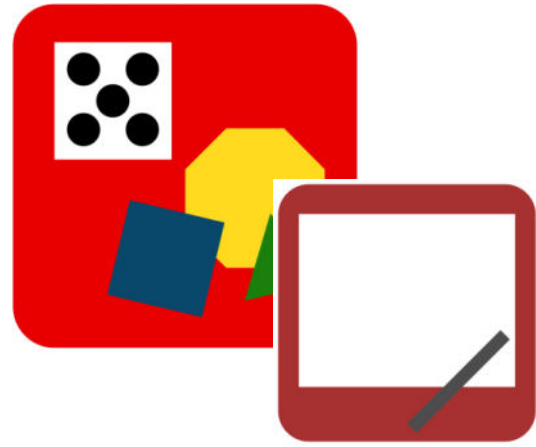
Concept Development

Let's try more! We'll try counting up all the fingers we have left all at once instead of nodding our heads to count.



Concept Development

16 – 9



Concept Development

18 – 9

Problem Set

1 2 3 4 5

Problem Set

A STORY OF UNITS

Lesson 16 Problem Set 1•2

Name _____ Date _____

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

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

a. $12 - 9 = \underline{\quad}$

b. $\begin{array}{r} 12 \\ \wedge \\ - 9 \\ \hline \end{array} = \underline{\quad}$

Lucy had balloons left.

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

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

b. $\begin{array}{r} 15 \\ \wedge \\ - 9 \\ \hline \end{array} = \underline{\quad}$

Justin has blueberries left to eat.

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

3. a. $11 - 9 = \underline{\quad}$

b. $\begin{array}{r} 11 \\ \wedge \\ - 9 \\ \hline \end{array} = \underline{\quad}$

☐ take from ten

☐ count on

4. a. $18 - 9 = \underline{\quad}$

b. $\begin{array}{r} 18 \\ \wedge \\ - 9 \\ \hline \end{array} = \underline{\quad}$

☐ take from ten

☐ count on

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

$16 - 9$

$12 - 9$

$18 - 9$

$11 - 9$

$15 - 9$

$14 - 9$

$13 - 9$

$19 - 9$

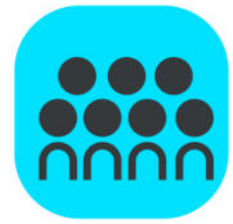
$17 - 9$

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

Problems to use the count on strategy with:

Problems to use the take from ten strategy with:

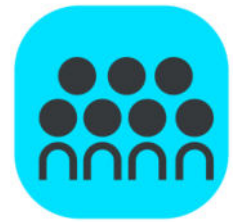
Were there any problems that were just as easy using either method? Did you use a different method for any problems?



Debrief



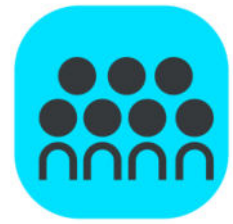
- In Problem 3, how is the take from ten strategy similar to counting on?



Debrief



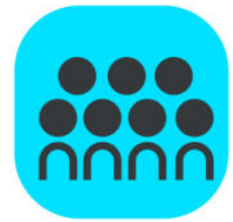
- We used our pretend fingers to show the take from ten strategy. How is this like counting on? What did we do to make our count on strategy more efficient? Look at Problem 5. Which strategy did you choose for each problem? Explain your reasoning.



Debrief



What new math strategy did we use today to solve subtraction problems more efficiently?



Debrief



Look at your Application Problem. How did you choose to solve it? Explain your thinking. How could the strategies discussed today be used to solve this problem?



Exit Ticket

A STORY OF UNITS

Lesson 16 Exit Ticket

1•2

Name _____ Date _____

Complete the subtraction sentences by using both the count on and take from ten strategies.

1. a. $13 - 9 = \underline{\quad}$

b. $\begin{array}{r} 13 \\ \wedge \\ - 9 \\ \hline \end{array} = \underline{\quad}$

2. a. $17 - 9 = \underline{\quad}$

b. $\begin{array}{r} 17 \\ \wedge \\ - 9 \\ \hline \end{array} = \underline{\quad}$