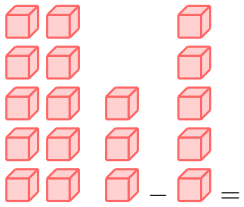
SUBTRACTION WITHIN 20

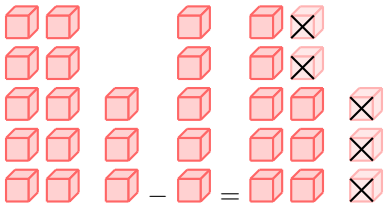
A DEFINITIONS

Discover: Have you ever given away some of your toys or candies to a friend? When you do that, you're subtracting! Let's see: if you have 13 cubes, and you give 5 cubes to your friend, how many cubes do you have left?



Answer: Now you have 8 cubes left! In math, we write it like this:

$$13 - 5 = 8$$



Definition **Subtraction**

Subtraction means taking something away. When we subtract, we find out how many are left.

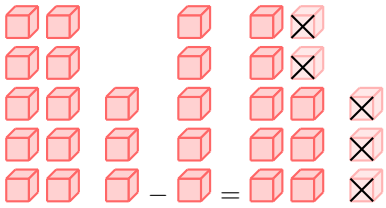
- The $-$ symbol means "subtract."
- The $=$ symbol shows that the two sides are the same.

We can represent subtraction as:

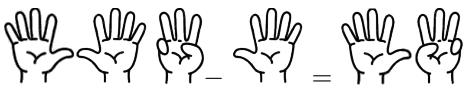
- **Numbers**:

$$13 - 5 = 8$$

- **Cubes**:



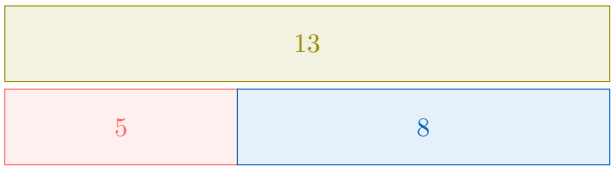
- **Fingers**:



- **Words**:

thirteen minus five equals eight

- **Part whole model**:

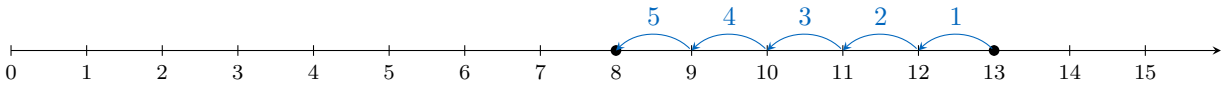


B NUMBER LINE METHOD

Method Subtracting using the Number Line

We want to find $13 - 5$.

- Place a marker on 13.
- Move 5 steps backward.



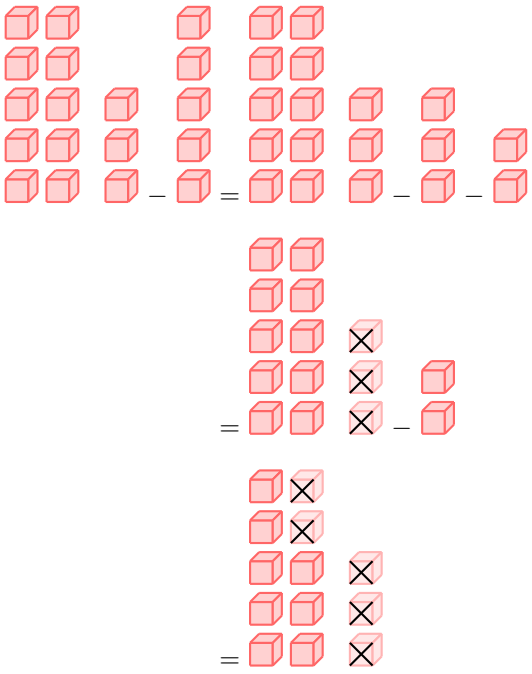
So, $13 - 5 = 8$.

C MAKING 10 METHOD

Method Subtracting with the Making 10 Method

To subtract $13 - 5$, we can break down the subtraction into two steps by first making 10.

1. **Start with 13**: We have 13 as our starting number.
2. **Make 10**: Ask yourself, **How many do we need to reach 10?** Since we're subtracting, we need to remove 3 first to reach 10. Now, we're left with $13 - 3 = 10$.
3. **Finish the Subtraction**: We still need to subtract 2 more from 10, which gives us $10 - 2 = 8$.

- 

- $13 - 5 = 13 - 3 - 2$
  $= 10 - 2$
  $= 8$

So, $13 - 5 = 8$.

D ADDITION AND SUBTRACTION LINK

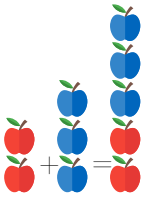
Discover: Imagine you have 2 red apples, and your friend gives you 3 blue apples.

1. How many fruits do you have now?
2. If you eat the 3 blues apples, how many are left?
3. Can you see the connection between the two questions?

Answer:

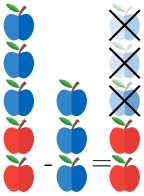
1. Now you have 5 apples in total.

$$2 + 3 = 5$$



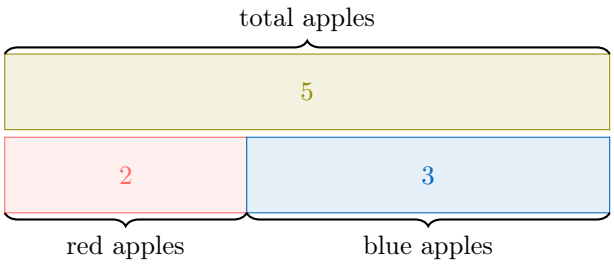
2. If you take away the 3 blues apples, you'll be left with 2 red apples.

$$5 - 3 = 2$$



3. See how addition and subtraction are linked? Adding 3 to 2 gives 5, and removing 3 from 5 brings us back to 2.

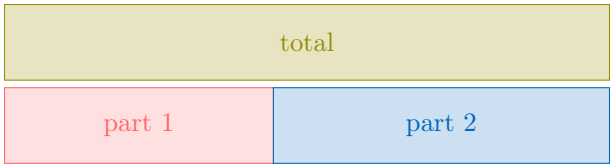
$$2 + 3 = 5 \text{ and } 5 - 3 = 2$$



Proposition Addition and Subtraction Link

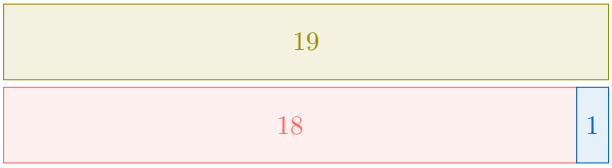
Addition and Subtraction are opposites:Adding and subtracting are opposites:

$$\text{part 1} + \text{part 2} = \text{total}$$
$$\text{total} - \text{part 1} = \text{part 2}$$
$$\text{total} - \text{part 2} = \text{part 1}$$



Ex: Calculate: $19 - 18$

Answer:

- 

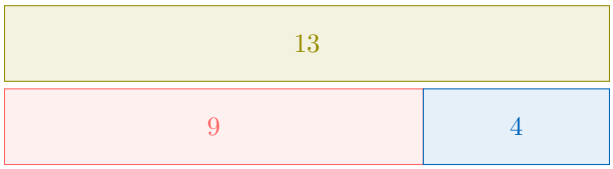
- Because $18 + 1 = 19$, $19 - 18 = 1$

Method **Counting On**

For $13 - 9$:

1. Start with 9.
2. Count forward 10, 11, 12, 13. We added 4 numbers to reach 13.

So, $13 - 9 = 4$ because $9 + 4 = 13$.



E PROBLEM-SOLVING METHODS

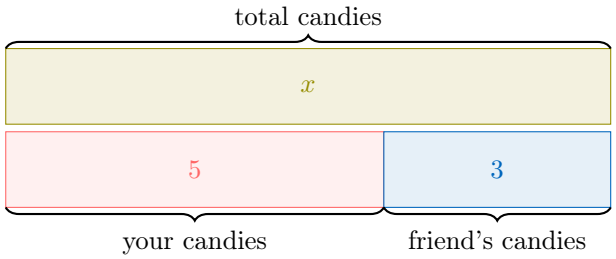
In math, we often need to find answers to problems that involve either adding or subtracting. Here's how we can solve these problems step-by-step.

Method **Steps to Solve Word Problems**

1. **Understand the Problem**: Read the problem carefully. Look for keywords like "altogether" for addition or "left" for subtraction.
2. **Decide on the Operation**: Determine whether you need to add or subtract to solve the problem.
3. **Set Up the Equation**: Write the equation that matches the problem. If you are finding the total, use addition. If you are finding what is left, use subtraction.
4. **Solve and Check**: Solve the equation. After you find the answer, check if it makes sense with the problem.

Ex: You have 5 candies, and your friend gives you 3 more. How many candies do you have now?

Answer:

- Start with the 5 candies you have, and add the 3 candies your friend gave you.
- 

- $5 + 3 = 8$
- So, you have 8 candies in total.