SUBTRACTION WITHIN 100

A WHAT IS SUBTRACTION?

> **Definition Subtraction**
>
> **Subtraction** means taking an amount away from a group to find out what is left. This result is called the **difference**.
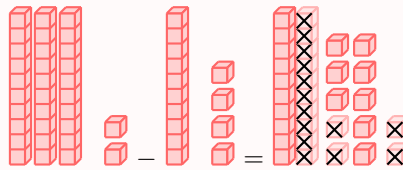>
> - The **minus sign $(-)$** tells us to subtract.
> - The **equals sign $(=)$** shows that both sides have the same value.
>
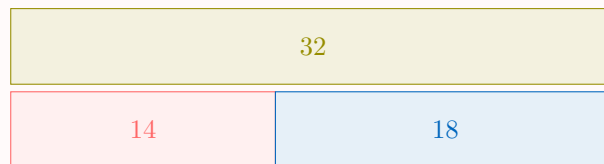> We can show "thirty-two minus fourteen equals eighteen" in different ways:
>
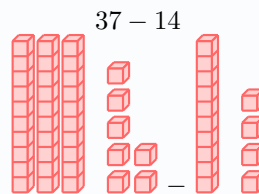> - **With numbers**:
> $$32 - 14 = 18$$
>
> - **With cubes**:
>
>
>
> - **With part whole model**:
>
>

B SUBTRACTING ONES THEN TENS

> **Method Subtracting Ones Then Tens Using Cubes**
>
> To calculate:
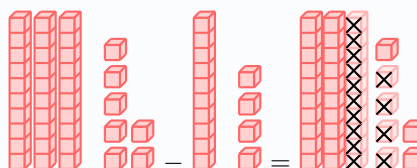> $$37 - 14$$
>
>
>
> - **Step 1: Subtract the ones**
> $$7 \text{ ones} - 4 \text{ ones} = 3 \text{ ones}$$
>
> - **Step 2: Subtract the tens**
> $$3 \text{ tens} - 1 \text{ ten} = 2 \text{ tens}$$
>
> - **Result**: There are 2 tens and 3 ones. So,
> $$37 - 14 = 23$$
>
>

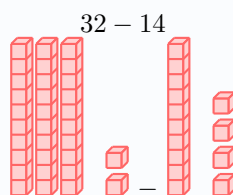Now let's try $32 - 14$. When we look at the ones place, we need to do:
$$2 \text{ ones} - 4 \text{ ones}$$

We don't have enough ones to take 4 away! To solve this, we can **regroup**. We will trade 1 ten for 10 new ones. Now we

will have enough. Let's see how it's done!

Method **Subtracting Ones Then Tens with Regrouping**
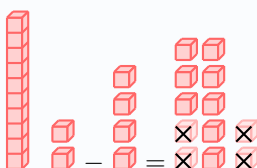
To calculate:

$$32 - 14$$

- **Step 1: Subtract the ones with regrouping**

$$2 \text{ ones} - 4 \text{ ones}$$

We don't have enough ones, so we borrow 1 ten from the tens place, turning it into 10 ones. Now we have 12 ones.

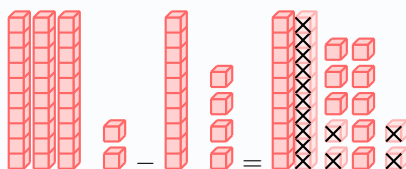$$12 \text{ ones} - 4 \text{ ones} = 8 \text{ ones}$$

- **Step 2: Subtract the tens**

$$3 \text{ tens of } 32 - 1 \text{ ten of } 14 - 1 \text{ ten of borrowing} = 1 \text{ ten}$$

- **Result**: There is 1 ten and 8 ones. So,

$$32 - 14 = 18$$
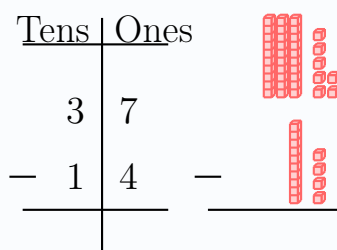

C SUBTRACTION IN COLUMNS

Method **Subtraction in Columns**

To calculate:

$$37 - 14$$

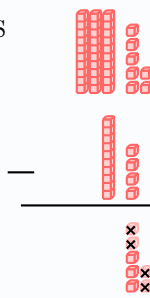- **Step 1: Set up the subtraction**
  Write the numbers in a vertical column, making sure the digits line up by place value (ones under ones, tens under tens).

- **Step 2: Subtract the ones**

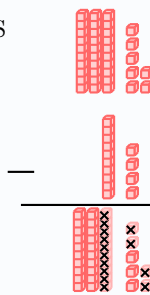$$7 \text{ ones} - 4 \text{ ones} = 3 \text{ ones}$$

$$\begin{array}{c|c} \text{Tens} & \text{Ones} \\ \hline 3 & 7 \\ -\ 1 & 4 \\ \hline & 3 \end{array}$$

- **Step 3: Subtract the tens**

$$3 \text{ tens} - 1 \text{ ten} = 2 \text{ tens}$$

$$\begin{array}{c|c} \text{Tens} & \text{Ones} \\ \hline 3 & 7 \\ -\ 1 & 4 \\ \hline 2 & 3 \end{array}$$

- **Result**: There are 2 tens and 3 ones. So,

$$37 - 14 = 23$$

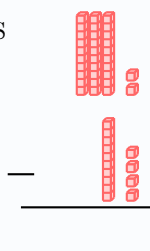Method **Column Subtraction with Regrouping**

To calculate:

$$32 - 14$$

- **Step 1: Set up the subtraction**
  Write the numbers in a vertical column, making sure the digits line up by place value (ones under ones, tens under tens).

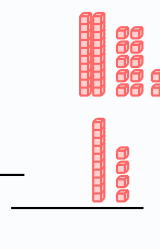$$\begin{array}{c|c} \text{Tens} & \text{Ones} \\ \hline 3 & 2 \\ -\ 1 & 4 \\ \hline & \end{array}$$

- **Step 2: Regroup 1 Ten**

$$2 \text{ ones} - 4 \text{ ones}$$

We don't have enough ones, so we borrow 1 ten from the tens place, turning it into 10 ones. Now we have 12 ones.
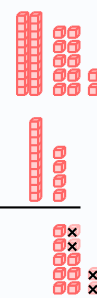
$$\begin{array}{c|c} \text{Tens} & \text{Ones} \\ \hline 2 & 12 \\ \cancel{3} & \cancel{2} \\ -\ 1 & 4 \\ \hline & \end{array}$$

- **Step 3: Subtract the ones**

$$12 \text{ ones} - 4 \text{ ones} = 8 \text{ ones}$$

$$
\begin{array}{c|c}
\text{Tens} & \text{Ones} \\
\hline
2 & 12 \\
\cancel{3} & \cancel{2} \\
\end{array}
$$
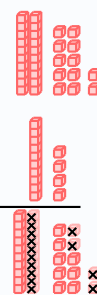
$$
-\ 1\ \big|\ 4 \qquad -
$$

$$
\big|\ 8
$$

- **Step 4: Subtract the tens**

  3 tens (from 32) − 1 ten (from 14) − 1 ten (borrowed) = 1 ten

$$
\begin{array}{c|c}
\text{Tens} & \text{Ones} \\
\hline
2 & 12 \\
\cancel{3} & \cancel{2} \\
\end{array}
$$

$$
-\ 1\ \big|\ 4 \qquad -
$$

$$
1\ \big|\ 8
$$

- **Result**: There is 1 ten and 8 ones. So,
$$
32 - 14 = 18
$$