SUBTRACTION

A DEFINITIONS

> **Definition Subtraction**
>
> **Subtraction** means taking something away. When we subtract, we find out how many are left.
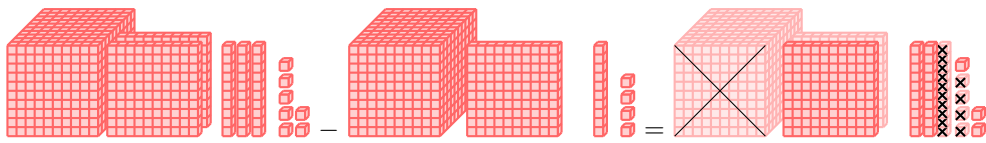>
> - The $-$ symbol means "subtract."
>
> - The $=$ symbol shows that the two sides are the same.
>
> We can represent subtraction as:
>
> - **Numbers**:
> $$1\,237 - 1\,114 = 123$$
>
> - **Cubes**:
>
>
>
> - **Words**:
>
>   one thousand two hundred thirty-seven minus one thousand one hundred fourteen equals one hundred twenty-three
>
> - **Subtraction Using Columns** :
>
> $$\begin{array}{r} 1\ 2\ 3\ 7 \\ -\ 1\ 1\ 1\ 4 \\ \hline 1\ 2\ 3 \end{array}$$

B SUBTRACTION USING COLUMNS

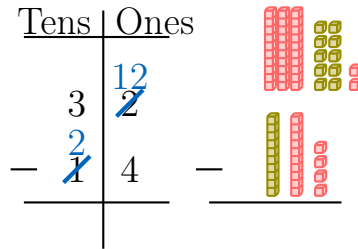> **Method Subtraction in Columns with Compensation**
>
> To calculate:
> $$32 - 14$$
>
> - **Step 1: Set up the subtraction**
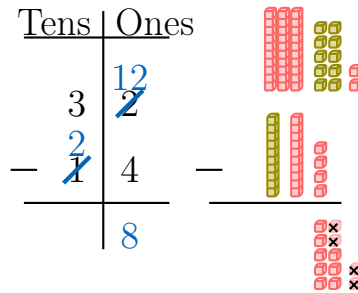>
>
>
> - **Step 2: Compensate 1 Ten**
> $$2 \text{ ones} - 4 \text{ ones}$$
>
>   There are not enough ones. You regroup 10 ones to make it 12. You compensate by adding 1 ten to 14, which makes it 2 tens.
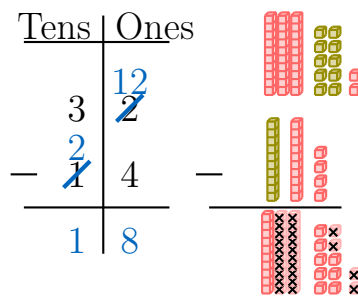
$$
\begin{array}{c|c}
\text{Tens} & \text{Ones} \\
\hline
3 & \overset{12}{\cancel{2}} \\
- \ \overset{2}{\cancel{1}} & 4 \\
\hline
\end{array}
$$

- **Step 3: Subtract the ones**

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

$$
\begin{array}{c|c}
\text{Tens} & \text{Ones} \\
\hline
3 & \overset{12}{\cancel{2}} \\
- \ \overset{2}{\cancel{1}} & 4 \\
\hline
& 8
\end{array}
$$

- **Step 4: Subtract the tens**

$$3 \text{ tens (from 32)} - 1 \text{ ten (from 14)} - 1 \text{ ten (compensation)} = 1 \text{ ten}$$

$$
\begin{array}{c|c}
\text{Tens} & \text{Ones} \\
\hline
3 & \overset{12}{\cancel{2}} \\
- \ \overset{2}{\cancel{1}} & 4 \\
\hline
1 & 8
\end{array}
$$

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

$$32 - 14 = 18$$