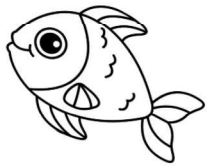
Adding Integers with Integer Chips



Vocabulary:

Zero Pair: A pair of numbers whose sum is zero.

Math:

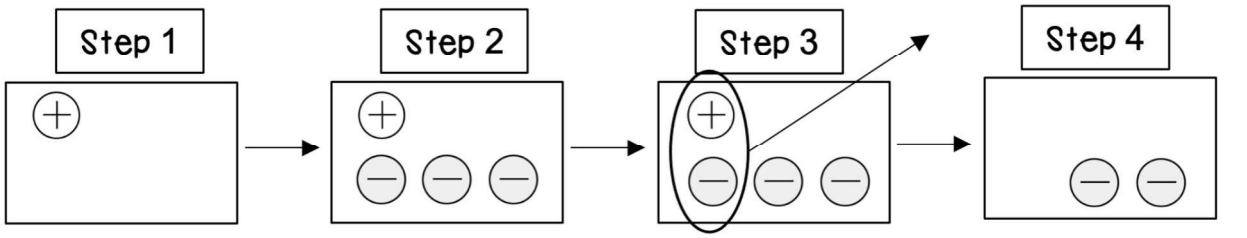
$\oplus + \ominus = 0$

$1 + (-1) = 0$

Integers can be modeled using integer chips:

$\ominus = -1$ or "one negative" $\oplus = 1$ or "one positive"

Example 1: $1 + (-3) =$ _____ "one positive plus three negatives"



Draw the one positive (1).

Add in three negatives (-3).

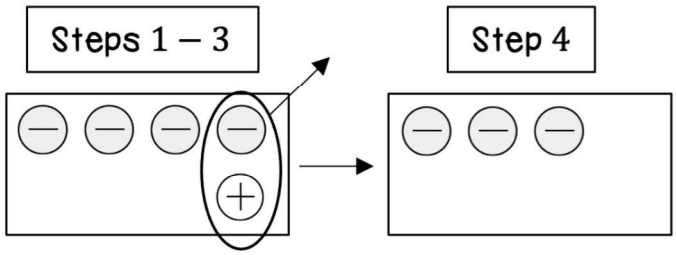
Take out any zero pairs.

What's left is the answer (-2).

$1 + (-3) = -2$

Example 2: $-4 + 1 =$ _____ "four negatives plus one positive"

- Let's streamline by combining some steps in the same box.
- Steps $1 - 3$ can be drawn in the first box, then the second box will show the answer.



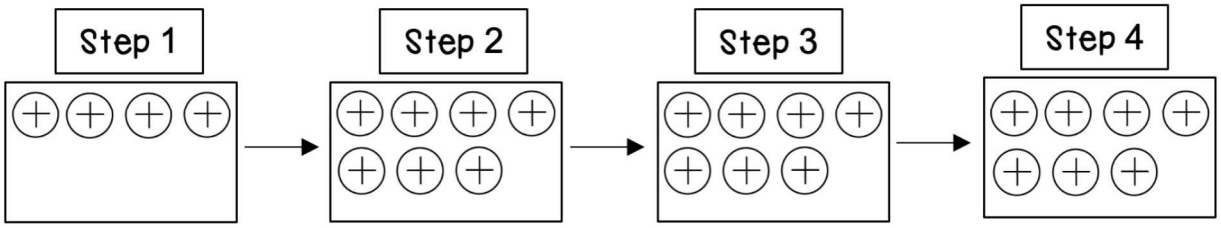
$-4 + 1 = -3$

1. Draw the four negatives (-4).
2. Add the one positive (1).
3. Take out any zero pairs.
4. What's left is the answer (-3).

*Note: Parenthesis are used around negative numbers to avoid confusion.

→ Sometimes there won't be any zero pairs to take out ←

Example 3: $4 + 3 =$ _____ "four positives plus three positives"



Draw the four positives (4).

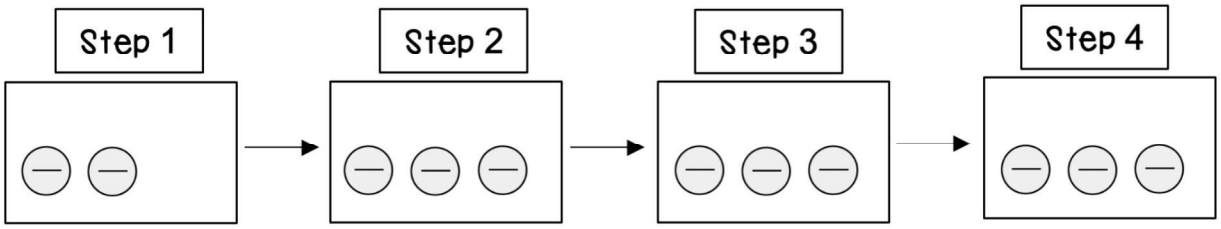
Add in three positives (3).

Take out any zero pairs. (none)

What's left is the answer (7).

$$4 + 3 = 7$$

Example 4: $(-2) + (-1) =$ _____ "two negatives plus one negative"



Draw the two negatives (-2).

Add in one negative (-1).

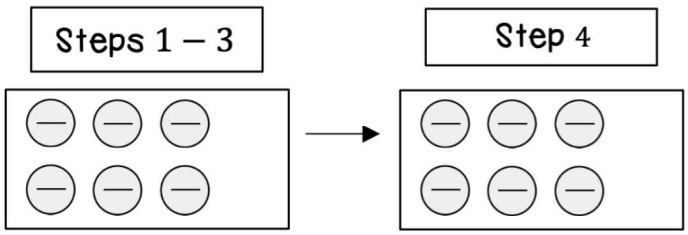
Take out any zero pairs. (none)

What's left is the answer (-3).

$$(-2) + (-1) = (-3)$$

Example 5: $(-5) + (-1) =$ _____ "five negatives plus one negative"

- Let's streamline again by combining some steps in the same box.
- Steps $1 - 4$ can be drawn in one box because you don't have to take out any zero pairs.
- BUT, to keep things consistent, let's still draw the answer in a second box.



$$-5 + (-1) = -6$$

1. Draw the five negatives (-5).
2. Add the one negative (-1).
3. There are no zero pairs to take out.
4. What you drew is the answer (-6).