

Chapter 8 Math Link Introduction

This worksheet will help you with the Math Link introduction on page 285.

Integer Chips

In your student resource, a red chip represents the value of +1 and a blue chip represents the value of -1. On worksheets, a chip with a + sign on it \oplus represents the value of +1. A chip with a - sign on it \ominus represents the value of -1.

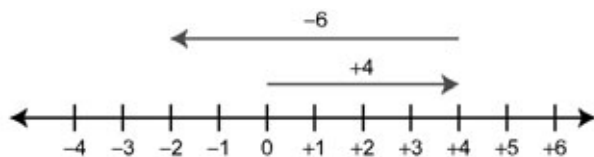
A zero model consists of one positive chip and one negative chip: $(+1) + (-1) = 0$

Example:



The model represents $(+5) + (-3) = +2$

Number Lines



The number line models $(+4) + (-6) = -2$.

1. The diagram models a starting temperature of $-3\text{ }^{\circ}\text{C}$ and an increase of $8\text{ }^{\circ}\text{C}$.



- How does the diagram model the situation?
 - What is the final temperature? Using the diagram above, show how you know.
2. The diagram models a starting temperature of $4\text{ }^{\circ}\text{C}$ and a decrease of $9\text{ }^{\circ}\text{C}$.
- How does the diagram model the situation?
 - What is the final temperature?
Using the diagram above, show how you know.
 - Draw a diagram using integer chips to model the same situation. Include an explanation for your diagram.
3. Suppose a temperature change from $5\text{ }^{\circ}\text{C}$ to $-15\text{ }^{\circ}\text{C}$ occurs over a 4-h period.
- What is the total change of temperature over the 4 h?
 - What operation would you perform to determine the change per hour?
 - Find the temperature change per hour.

