

Chapter 6 Integers

Study Guide

ADDITION OF INTEGERS

SAME SIGN - Add and Keep the Sign!

Add the absolute value of the numbers and keep the same sign.

$$\text{(positive)} + \text{(positive)} = \text{(positive)}$$

$$\text{ex. } (+5) + (+3) = (+8)$$

$$\text{(negative)} + \text{(negative)} = \text{(negative)}$$

$$\text{ex. } (-5) + (-3) = (-8)$$

DIFFERENT SIGNS - Subtract and Keep the Sign of the Bigger Number!

Subtract the absolute value of the numbers and keep the sign of the bigger number.

$$(-4) + (+3) = -1$$

$$(+4) + (-3) = +1$$

SUBTRACTION OF INTEGERS

Do not subtract integers. You must change the signs.... "Add the Opposite"

KEEP - Keep the sign of the first number

CHANGE - Change the subtraction sign to addition.

CHANGE - Change the sign of the second number to the opposite sign. If it is positive -> change to negative. If it is negative -> change to a positive.

$$(+4) - (-4)$$

$$\begin{array}{ccc} \text{Keep} & \text{Change} & \text{Change} \\ (+4) & + & (+4) \end{array}$$

Now use the rules for adding:

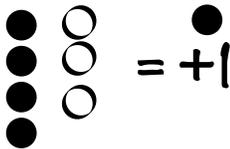
Same Sign - Add absolute values and keep sign:

$$(+4) + (+4) = 8$$

ADDITION W/ COUNTERS

Pair up the positive and negative chips to cancel each other out.

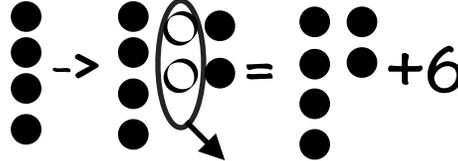
$$\text{ex. } (+4) + (-3)$$



SUBTRACTION W/ COUNTERS

When subtracting integers with integer chips, we may need to first add zero!

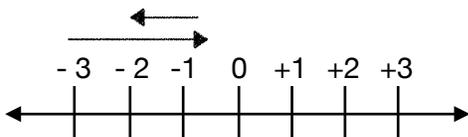
$$\text{ex. } (+4) - (-2)$$



ADDITION W/ NUMBER LINE

When adding integers using a number line we can use the first integer we see as our starting point and move RIGHT for positive and LEFT for negative integers.

$$\text{ex. } (-3) + (+2) + (-1) = (-2)$$



SUBTRACTION W/ NUMBER LINE

When subtracting integers using a number line, we move the opposite direction as we would if we were adding. LEFT for positive and RIGHT for negative.

$$\text{ex. } (+3) - (+2) - (-1) = (+2)$$

