

**1.3**

# **SUBTRACTING INTEGERS**

# **DO NOW**

**Tell whether the sum is positive, negative, or zero without adding. Explain your reasoning.**

**1.  $-8 + 20$**

**2.  $30 + (-30)$**

**3.  $-10 + (-18)$**

# Adding Integers Rules

## SAME SIGN

- Ignore the signs
- Add numbers
- Put sign back

$$5 + 3 =$$

$$-4 + (-6) =$$

$$-13 + (-9) =$$

## DIFFERENT SIGNS

- Ignore the signs
- Subtract
- Put sign back of number that “looks” the biggest

$$-5 + 3 =$$

$$-4 + 6 =$$

$$-13 + 9 =$$

# Seeing how subtraction is related to addition...

## Subtraction

$$3 - 3 =$$

$$3 - 2 =$$

$$3 - 1 =$$

$$3 - 0 =$$

$$3 - -1 =$$

$$3 - -2 =$$

$$3 - -3 =$$

## Addition

$$3 + -3 =$$

$$3 + -2 =$$

$$3 + -1 =$$

$$3 + 0 =$$

$$3 + 1 =$$

$$3 + 2 =$$

$$3 + 3 =$$

# **Subtraction is the same as adding the opposite**

- 1. Change the minus sign to addition**
- 2. Change the second number into the opposite**
- 3. Do the problem like a regular addition problem**

$$5 - 7$$

$$3 - (-7)$$

$$-3 - 6$$

$$-5 - (-9)$$

# Examples

$$1) -7 - 2$$

$$3) 8 - 15$$

$$2) -5 - (-11)$$

$$4) 4 - (-3)$$

# Pratice

5)  $8 - 3$

7)  $-12 - (-12)$

6)  $-5 - (-11)$

8)  $9 - (-8)$

## Real-Life Applications



The highest elevation in Mexico is 5700 meters, on Pico de Orizaba. The lowest elevation in Mexico is -10 meters, in Laguna Salada. What is the difference in elevations in Mexico?