

September 13, 2011

**Warm-up:**

**Subtract.**

1.  $45 - 11$      34

3.  $91 - 14$      77

5.  $87 - 29 - 13$

$$\begin{array}{r} 87 \\ - 29 \\ \hline 58 \end{array} \quad \begin{array}{r} 58 \\ - 13 \\ \hline 45 \end{array}$$

2.  $87 - 23$      64

4.  $76 - 69$      7

6.  $65 - 52 - 11$

$$\begin{array}{r} 65 \\ - 52 \\ \hline 13 \\ - 11 \\ \hline 2 \end{array}$$

Get out homework from Monday...

Questions???

## 9/13 - Subtracting Integers, Evaluating

### Review--

Subtract Rule:

change subtract to add,  
then change the sign of the 2nd #  
"Add the opposite"

Examples:

$$-3 +^{-}4 = -7$$

$$10 +(^{-}8) = 18$$

$$-3 +(^{-}10) = -7$$

$$4 +^{-}15 = -11$$

What if you are adding/subtracting 3 or more numbers?

$$\begin{aligned} & \underline{8 - 12} - (-6) \\ &= -4 + (+6) \\ &= \textcircled{2} \end{aligned}$$

$$\begin{aligned} & \underline{9 + (-4)} + 1 \\ &= 5 + 1 \\ &= 6 \end{aligned}$$

Subtract:

$$\begin{aligned} & \underline{-14 + 6} - (-2) \\ &= -20 + (+2) \\ &= \textcircled{-18} \end{aligned}$$

$$\begin{aligned} & \underline{-11 + (-8)} - (-3) \\ &= -3 + (+3) \\ &= \textcircled{0} \end{aligned}$$

*What does "evaluate" mean,  
in mathematical terms?*

*Discuss it with your partner*

*Replace Variables with  
the numbers the equal  
then simplify*

Evaluate the expression when  $r = -5$ ,  $s = 2$ , and  $t = -1$ .

$$\begin{aligned} & r - t \\ &= -5 + (+1) \\ &= \textcircled{-4} \end{aligned}$$

$$\begin{aligned} & t + s - r \\ &= -1 + 2 + (+5) \\ &= \textcircled{6} \end{aligned}$$

$$\begin{aligned} & * |s - r| \\ &= |2 + (+5)| \\ &= |7| \\ &= \textcircled{7} \end{aligned}$$

\* do the inside  
first THEN  
do the | |.

The table shows the highest and lowest elevations for two cities.

- a. Find the range of elevations for Long Beach.

*Subtract*

City	Highest elevation (feet)	Lowest elevation (feet)
Long Beach, CA	360	-7
New Orleans, LA	25	-8

- b. Find the range of elevations for New Orleans.

- c. One of the cities has an average elevation of about 2 feet below sea level. Which city is it?

Discuss answers with your partner.

$$\begin{array}{l} \text{a) } 360 - (+7) \\ \quad = 353 \end{array} \quad \begin{array}{l} \text{b) } 25 - (+8) \\ \quad = 17 \end{array}$$

## **Homework.**

Worksheet 1.3 Practice B

due Wednesday