

# September 10, 2014 <sup>1st</sup> <sub>2nd</sub>

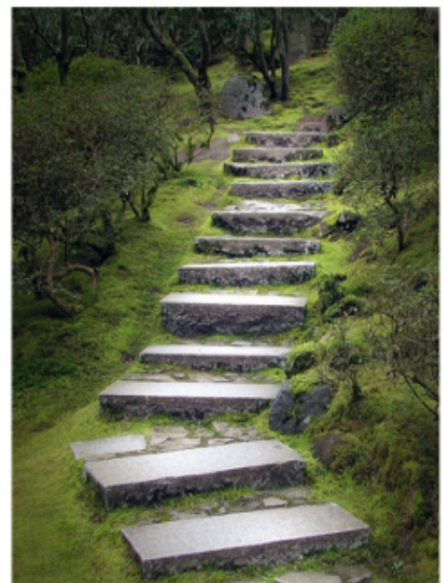
Starter

---

## YOGI'S STAIRS

A yogi has a very specific way of climbing his steps in the morning. First, he climbs to the middle step and meditates for 1 minute. Then, he climbs 8 steps and faces east until he hears the birds singing. Next, he walks down 12 steps and picks up a pebble. He takes one step up and tosses the pebble over his left shoulder. Now, he walks up the remaining steps 3 at a time which only takes him 9 paces.

How many steps are there?



## 9/9 Subtracting Integers using Rules

### Quick Write:

How are  $4-2$  and  $4+(-2)$  basically the same?

- Negative means "reverse" so  $4-2$  is the same as  $4+(-2)$
- Both go left on the # line
- They end up with the same answer

Since  $4-2$  and  $4+(-2)$  are basically the same we can use them to make a rule for subtract:

Rule:  $a - b \Rightarrow a + (-b)$   
change subtract to add

"Add the opposite"

"Change the subtract to add;  
Change the sign of the 2nd #."

## Subtract.

$$1. \quad 3 - 8 = -5$$

Change to Add      Change to a negative

$$2. \quad 6 - (-7)$$

Change both

$$= 6 + (+7)$$
$$= 13$$

$$3. \quad -10 - 9$$

Change Both

$$= -19$$

Never change the first #.

$$4. \quad -5 - (-4)$$
$$= -5 + (+4)$$
$$= -1$$

$$\begin{aligned} 5. \quad & 11 + (+2) + 14 \\ & \underline{13} + 14 \\ & = 27 \end{aligned}$$

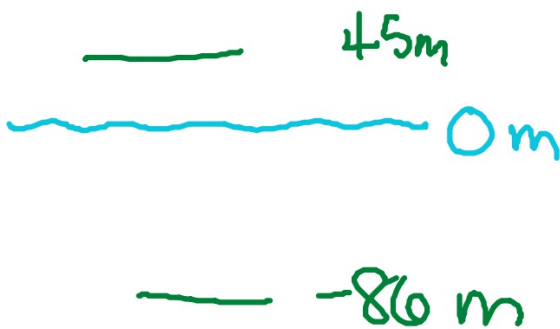
$$\begin{aligned} 6. \quad & -16 + (+12) + (-8) \\ & \underline{-4} + (-8) \\ & = -12 \end{aligned}$$

change -  
change -

$$\begin{aligned} 7. \quad & 6 + (-17) + (-4) \\ & \underline{-11} + (-4) \\ & = -15 \end{aligned}$$

11. You begin a hike in Death Valley, California, at an elevation of  $-86$  meters. You hike to a point of elevation at  $45$  meters. What is your change in elevation?

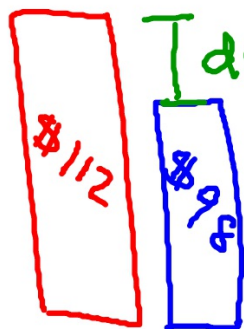
Draw it out first to SEE what is happening!



$$\begin{array}{l} \downarrow \text{Change in} \\ 45 - (+86) \\ = 131 \text{ m} \end{array}$$

12. You sell T-shirts for a fundraiser. It costs \$112 to have the T-shirts made. You make \$98 in sales. What is your profit?

Draw it out!



difference

$$\begin{array}{r} 101 \\ \cancel{112} \\ - 98 \\ \hline = \$14 \end{array}$$

$$- \$14$$
$$- \$14$$

# Homework

Salmon WS 1

# Due