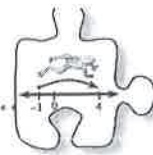


3.2.3 How do the distances compare?



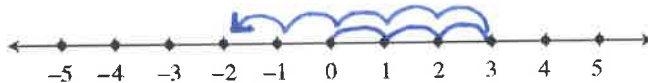
Absolute Value

So far in this section, you have made connections between integer expressions and movement on a number line. Let's review:

1. Complete the table below:

Integer	
Examples: 3, -7, 0, 25, $\frac{5}{5}$	Non-Examples: $13.2, \frac{1}{5}, -17\frac{1}{2}$
Definition: Positive & Negative whole Numbers (and zero!)	

2. Draw a number line diagram for the following expression: $0 + 3 - 5 = \boxed{-2}$



3-111

3-111 Find the answer to each expression below. It may be helpful to visualize or draw a number line.

- a. $5 - 10$
- b. $-(-8) - 2$
- c. $-5 + 5$
- d. $-4 + 15$



3-112 Lorena's bank will loan money to customers if they overdraw their accounts by less than \$100. (To overdraw means to have the account balance go below zero.) Lorena started out with a balance of \$13.00 and made a withdrawal from her account of \$81.50.

take out

- a. In the context of this story, what does a positive number mean? A negative number? Zero?
- b. Lorena's final balance is $-\$68.50$. Will the bank loan her this amount? Write an inequality to show why or why not.

3-112

b)

$-10 =$
 -5

$8) -2 =$
 0

$-5 =$
 1

$-4 + 15 =$
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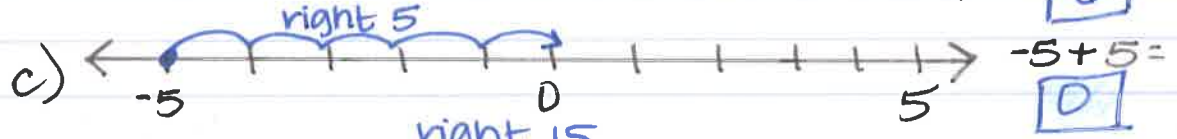
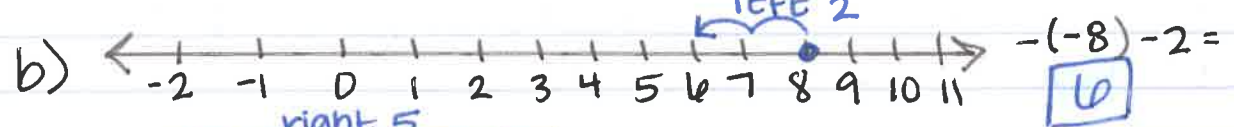
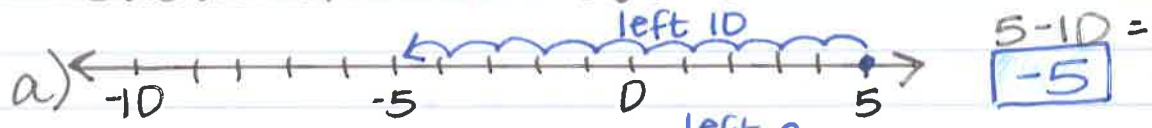


Key idea:

Negative -	Positive +
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- | | |
|---|---|
| <ul style="list-style-type: none"> • Move left on a line • Smaller • Left of zero • Opposite of a positive • Subtraction | <ul style="list-style-type: none"> • Move right on a number line. • Larger • Right of zero • Opposite of a negative • Addition |
|---|---|

3-111



3-112

- a) Positive means ...
 Zero means ...
 Negative means ...

- Options
- No money
 - Some money
 - Overdrawn

b) yes, the bank will loan her this amount. Lorena owes \$ 68.50 which is less than the \$ 100 limit.

$$\$ 68.50 < \$ 100$$