

pg 9

 Lesson 2-3: Absolute Values of Rational Numbers

I can...find and interpret absolute value.

**Solve & Discuss it!**

A portion of a bank account statement is shown below. How would you interpret the value of the ending balance? Explain.

Crest Bank		Account Statement
Ending Balance.....		-\$30.00

**Reasoning:** What does a balance of \$0 mean?

What is an example of a bank account balance that represents an amount owed greater than \$40?

**Example 1:** Describe Quantities using Absolute Values

**Vocabulary:**

Absolute Value: *a number's distance from 0 on the number line. Distance is always positive.*

\*Opposite numbers have the same absolute value because they are the same distance from zero.

$|2| = 2$       $|-2| = 2$

\*Opposite numbers have the same absolute value because they are the same distance from zero.

$$|2| = 2 \quad |-2| = 2$$

Stock prices rise and fall during the year. The table shows the overall change in the price of a company's stock from year to year.

During which two years was the overall change in the stock price the greatest?

Year	Change in price (\$)
2015	11
2014	19
2013	-34
2012	6

Try it!

The students in a science class recorded the change in the water level of a local river. During which week did the water level change the greatest amount?

Week	1	2	3
Change in water level (in.)	-7 1/2	2.2	-4.38

Convince me!

$$7\frac{1}{2} \quad 2.2 \quad 4.38$$

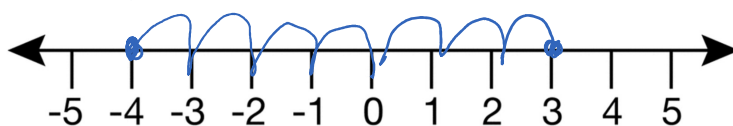
$$-15 \quad 10$$

Can a lesser number represent a greater change in the water level than a greater number? Explain.

**Example 2:** Find the Absolute Value

Find the absolute value. Use a number line.

a.)  $|-4| = 4$       b.)  $|0| = 0$       c.)  $|3| = 3$



**Example 3:** Interpret Absolute Value

Negative numbers sometimes represent debts. Yasmin is a business owner. The table shows three account balances that represent her gallery's debts.

A.) Which account has the least balance?

B

B.) Which account has the greatest debt?

B

Account	Balance
A	-\$35.42
B	-\$50.99
C	-\$12.75

B

B	-\$50.99
C	-\$12.75

**Try it!**

A bank has two customers with overdrawn accounts. Which balance is the greater number? Which balance is the lesser amount owed?

Account	Balance
V. Wong	-\$19.45
J. Olson	-\$23.76

**Do you understand?**

1.) How are absolute values used to describe quantities?

Positive distances  
change sea level / bank accounts

2.) Explain why -7 has a greater absolute value than the absolute value of 6.

$$|-7| = 7 \quad |6| = 6$$

3.) Of the three elevations, -2 feet, -12 feet, and 30 feet, which represents the least number? Which represents the farthest distance from sea level?

-12      30

Pg 81-82

# 19, 28, 31, 35, 39, 40, 41, 42, 45, 47

