

Lesson: Negative Rational Numbers

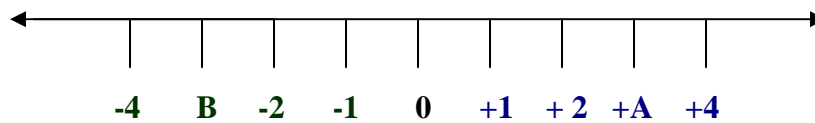
Sixth Grade Objective: 1.01 Develop number sense for negative rational numbers.

- a.) Connect the model, number word and number using a variety of representations, including the number line.
- b.) Compare and Order
- c.) Make estimates in appropriate situations

Lesson:

Examine -3 versus 3 .

What is the difference? That is correct! One is negative and one is positive, but what does that mean? I will show you on a number line.



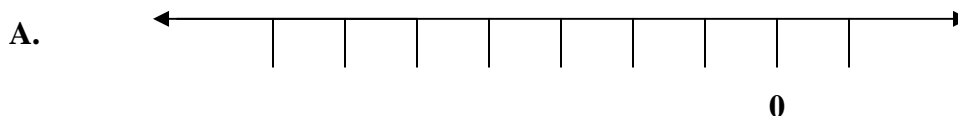
Look at the number line. You will see the zero in the middle and numbers to the left and right. The numbers on the right are positive and the numbers to the left are negative. The positive whole numbers, negative whole numbers and zero are called integers.

Lets determine letters A and B on the number line. Letter A is positive 3 and letter B is -3 . The dark arrows on both sides of the line indicate the line extends forever!

Negative numbers are always smaller than positive numbers. The trick, however, is that the farther you go on the negative side the smaller the number. For example, -4 is smaller than -2 .

Think about it in terms of weather. If the temperature is below zero that is COLD! For instance if Alaska's temperature is -45 degrees and Wisconsin is -10 degrees, which is colder (or smaller)? That is correct, Alaska.

Try these on your own!



1. Draw and label the number line.

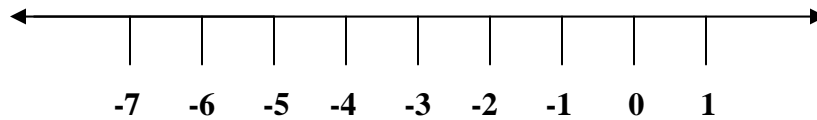
B. Compare. < > =

1. $-12 \square -2$

2. $3 \square -3$

3. $-25 \square -26$

Check your answers



A. Draw and label the number line.

B. Compare.

1. $-12 < -2$

2. $3 > -3$

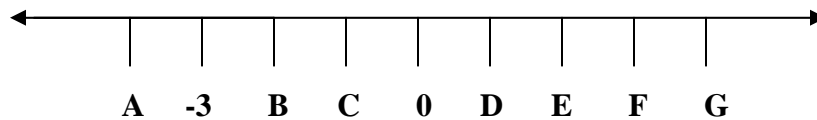
3. $-25 > -26$

Quiz Yourself

A. Write the correct integer.

1. Increase in speed of 20 miles
2. Decrease in speed of 20 miles
3. Loss of 14 pounds
4. Gain of 14 pounds

B.



1. Complete the number line.

C. Order from least to greatest.

1. $-1, -12, -5, 0$

2. $-67, -100, -45, -34$

3. $3, -3, 0, 7, -6, -56$

D. The weather Channel said Ontario, Canada is having a cold spell and its low is going to be -9 degrees Fahrenheit. Alaska is going to be -20 degrees Fahrenheit and New York is going to be 2 degrees Fahrenheit. What city is will be the coldest and the warmest? Would you want to live there? Why or Why not?

Extra Practice! Click on the website to practice ordering integers.

<http://www.bbc.co.uk/skillswise/numbers/wholenumbers/whatarenumbers/negative/numbers/game.shtml>

Check Your Answers

A. Write the correct integer.

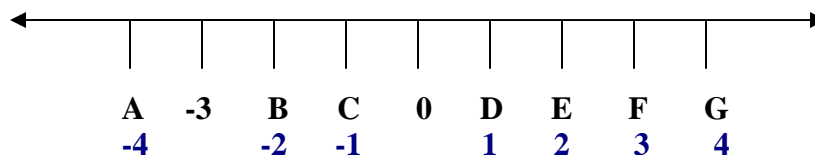
5. Increase in speed of 20 miles: $+20$

6. Decrease in speed of 20 miles: -20

7. Loss of 14 pounds: -14

8. Gain of 14 pounds: $+14$

B. Look at the models to answer the questions.



1. Complete the number line.

C. Order from least to greatest.

1. $-12, -5, -1, 0$

2. $-100, -67, -45, -34$

3. $-56, -6, -3, 0, 3, 7$

D. Alaska will be the coldest. Answers will vary.