

6-2**Comparing and Ordering Integers**

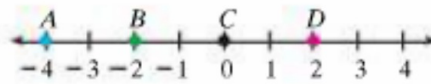
© CONTENT STANDARDS

6.NS.7.a

What You'll Learn

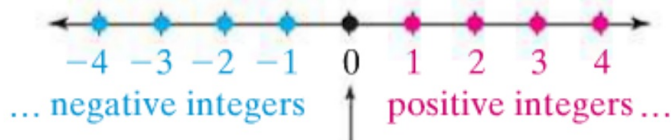
To compare and order integers

Match each integer with a point on the number line.

2. 0 3. 2 4. -2 5. -4 **Why Learn This?**

Negative points and scores are possible in some games. You need to compare and order integers to find who is winning.

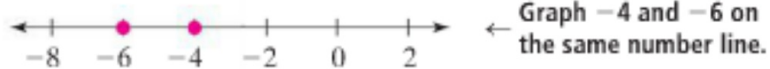
You can use a number line to compare integers. As you move to the right on a number line, the numbers become greater.



0 is neither positive nor negative.
The opposite of 0 is 0.

EXAMPLE**Comparing Integers**

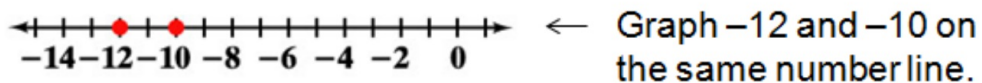
- 1 Compare -6 and -4 .



Since -6 is to the left of -4 on the number line, $-6 < -4$, or $-4 > -6$.

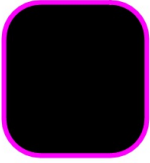
EXAMPLE

- 1 Compare -12 and -10 .



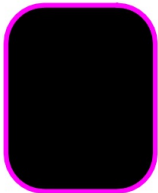
Since -12 is to the left of -10 , $-12 < -10$.

Table talk about this questions.



1. Compare the integers 5 and -3 .
 - A. $5 < -3$
 - B. $5 > -3$

table talk about this question



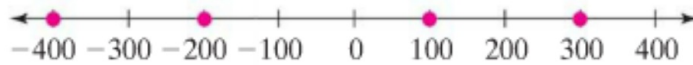
2. Compare the integers -12 and 9.
 - A. $-12 < 9$
 - B. $-12 > 9$

Using a numberline will help when ordering integers.

EXAMPLE Ordering Integers

- 2 **Games** Order the scores on the scoreboard from least to greatest.

Use one hundred as the number line interval.



Tigers	-200
Bulldogs	+300
Lions	-400
Spartans	+100

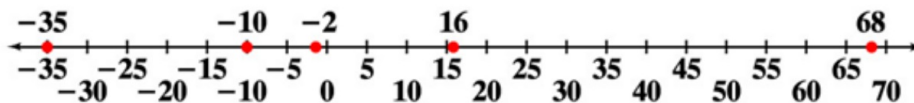
-400, -200, 100, 300 ← Order the scores from least to greatest.

In order, the scores are -400, -200, 100, and 300.

- 2 **EXAMPLE** Order from least to greatest.

a. 16, -2, -35, 68, -10

Use five as the number line unit.



-35, -10, -2, 16, 68 ← Write the numbers in order from left to right.

In order from least to greatest, the numbers are -35, -10, -2, 16, 68.

11-3a

Activity Lab

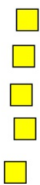
Modeling Addition of Integers

I will give each of you some algebra tiles. You need to carefully open the package, and then sort them according to size.

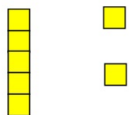
ACTIVITY

1. Find $5 + 2$.

Show 5 “+” chips.



Then add 2 “+” chips.



There are 7 “+” chips. So $5 + 2 = 7$.

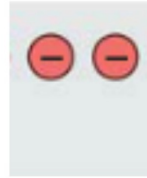


2. Find $-5 + (-2)$.

Show 5 “-” chips.



Then add 2 “-” chips.



=



There are 7 “-” chips.

So $-5 + (-2) = -7$.



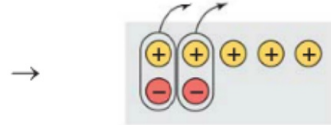
To add integers with different signs, use zero pairs. These chips \oplus \ominus are a *zero pair* because $\oplus + \ominus = 0$. Removing a zero pair does not change the sum.

3. Find $5 + (-2)$.

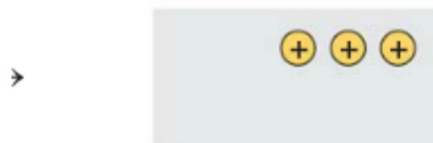
Show 5 “+” chips.
Then add 2 “-” chips.



Pair the “+” and “-” chips.
Remove the pairs.



There are 3 “+” chips left.
So $5 + (-2) = 3$.



Model this problem, and then solve it.

$$-4 + 3$$

Model this problem and then solve it

$$-7 + (-2)$$

Model this problem, then solve it

$$2 + 4$$

model this problem, then solve it

$$-6 + 3$$

Last one - model this problem, then solve it.

$$-5 + (-3)$$