Do Now:

Simplify the expression.

1. - | -123 | -123
2. | -123 | 123
3. - | 123 | -123
4. - (-123) 123
5. | 123 | 123

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3a)

$$- (- (-4))$$
$$(-1)(-1)(-4)$$
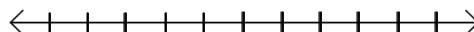$$(+1)(-4)$$
$$-4$$

-4

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2.2 Adding Integers

7.NS.1
7.EE.1

- SWBAT add integers.
- SWBAT understand numbers and understand meanings of operations.
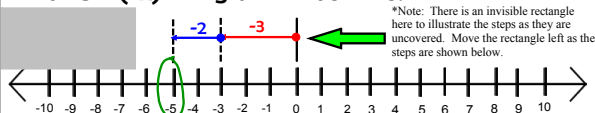
Calculators: No

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To add a positive integer, move to the right

To add a negative integer, move to the left

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Add Integers With the Same Sign

-5

Find –3 + (–2) using a number line.

-2   -3

*Note: There is an invisible rectangle here to illustrate the steps as they are uncovered. Move the rectangle left as the steps are shown below.

-10 -9 -8 -7 -6 -5 -4 -3 -2 -1 0 1 2 3 4 5 6 7 8 9 10

Start at 0.
Move 3 units left to show –3
From there, move 2 units left to show –2
So, –3 + (–2) = –5

Add Integers With the Same Sign
Your turn

Use the number line to solve the following problems. Move the arrow on the line to find the answer.

1) –1 + (–5) = -6

2) –4 + (–3) = -7

3) –7 + (–1) = -8

4) –6 + (–2) = -8

5) –5 + (–4) = -9

*Note: Students will drag the arrow to the proper places on the number line.

-10 -9 -8 -7 -6 -5 -4 -3 -2 -1 0 1 2 3 4 5 6 7 8 9 10

*Don't forget to start at 0 for each problem.

Add Integers With the Same Sign
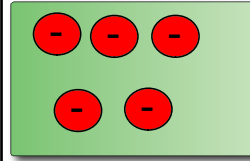### Discussion

What did you notice about the answers to each problem?

Adding two negative integers is like adding two positive integers. In other words, we add the absolute values.

Adding two negative integers gave us a negative answer.

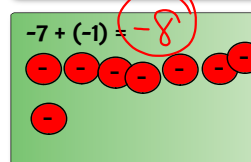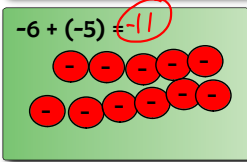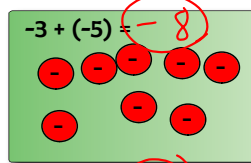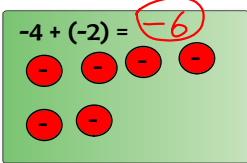## Add Integers With the Same Sign

Find –3 + (–2) using counters.

So, –3 + (–2) = –5

Add Integers With the Same Sign
Your turn

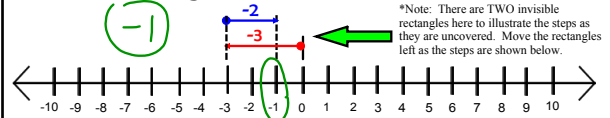Drag counters into the rectangles to solve the following problems.

–4 + (–2) = **–6**

–3 + (–5) = **–8**

–6 + (–5) = **–11**

–7 + (–1) = **–8**

Do the rules we found using number lines apply here?

Add Integers With Different Signs

Find –3 + 2 using a number line.

–1

*Note: There are TWO invisible rectangles here to illustrate the steps as they are uncovered. Move the rectangles left as the steps are shown below.

-10 -9 -8 -7 -6 -5 -4 -3 -2 -1 0 1 2 3 4 5 6 7 8 9 10

Start at O.
Move 3 units left to show –3
From there, move 2 units right to show 2
So, –3 + 2 = -1

Add Integers With Different Signs
Your turn

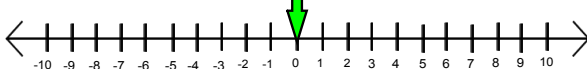Use the number line to solve the following problems. Move the arrow on the line to find the answer.

1) –1 + 5 = **4**　　　　3) 7 + (–1) = **6**

2) 4 + (–3) = **1**　　　4) –6 + 2 = **–4**

5) 4 + (–4) = **0**

-10 -9 -8 -7 -6 -5 -4 -3 -2 -1 0 1 2 3 4 5 6 7 8 9 10
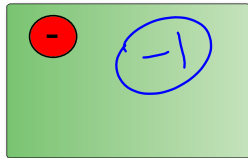
*Don't forget to start at 0 for each problem.

Add Integers With Different Signs
Discussion

What did you notice about the answers to each problem?

Add Integers With Different Signs

Find –3 + 2 using counters.

\-   (–1)

*Note: When I group a positive and negative counter together, they will cancel out, so I'll drag them to the trash can. Students love doing this.

Zero pairs are one positive and one negative counter. Group zero pairs together. Remove zero pairs.
So, –3 + (–2) = –5

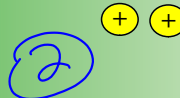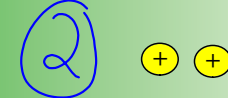
Add Integers With Different Signs
Your turn

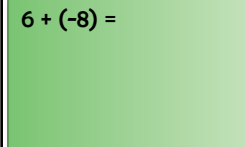Drag counters into the rectangles to solve the following problems.

4 + (–2) =   (2)

–3 + 5 =   (2)
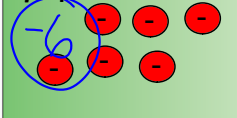
6 + (–8) =

–7 + 1 =   (–6)

Do the rules we found using number lines apply here?

Jul 20-6:47 PM

Homework

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(11)

$$35 + (-22) = 13$$

$$20 + (15) + (-22)$$

$$\begin{array}{c} -22 \\ +15 \\ \hline 32 \\ -7 \end{array} \qquad \begin{array}{c} -33~~37 \\ +20 \\ \hline 13 \end{array} \qquad (-12)$$

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Adding Integers

- Same sign
  - add absolute value and keep sign

Ex.) –1 + -8   Ex.) 3 + 6

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- Different signs
  - subtract absolute value
  - take the sign of number with the larger absolute value

Ex.) –2 + 7   Ex.) 5 + -12

Sep 18-6:32 PM

Find the sum.

a. -54 + (-28)

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b. 38 + (-17)

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c. -41 + 26

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d. -19 + (-11)

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e. 52 + (-30) + (-46)

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Exit Pass 2.2

You record withdrawals and deposits in your checkbook. The starting balance is $125. The first withdrawal is $25. The second withdrawal is $15. The first deposit is $35. The second deposit is $50. The third withdrawal is $60. What is the final balance?

Sep 18-10:08 AM

4

"Perfect practice makes perfect."

Working individually or with a partner, complete the classwork.

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Reflection of Today's Lesson

2.2 Adding Integers
7.NS.1
7.EE.1
- SWBAT add integers.
- SWBAT understand numbers and understand meanings of operations.

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Homework

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