



1st/3rd period  
-pencil  
-3-ring binder  
-agenda

4th, 5th,8th period  
-pencil  
-correcting pen  
-3-ring binder  
-agenda

Aug 27-4:21 PM

LESSON  
**17.1** Adding Integers with  
the Same Sign

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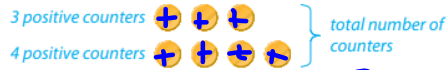
### Modeling Sums of Integers with the Same Sign

You can use colored counters to add positive integers and to add negative integers.



Model with two-color counters.

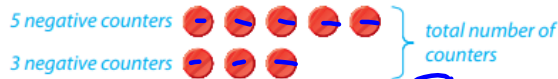
**A**  $3 + 4$



How many counters are there in total? 7

What is the sum and how do you find it?  
 $3 + 4 = 7$

**B**  $-5 + (-3)$



How many counters are there in total? 8

Since the counters are negative integers, what is the sum? -8

**Reflect**

- Communicate Mathematical Ideas** When adding two numbers with the same sign, what sign do you use for the sum?

the same sign

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**EXPLORE ACTIVITY 2** **FL 7.NS.1.1, 7.NS.1.1b**

### Adding on a Number Line

Just as you can add positive integers on a number line, you can add negative integers.

The temperature was 2 °F below zero. The temperature drops by 5 °F. What is the temperature now?

- A** What is the initial temperature written as an integer?  
-2

- B** Mark the initial temperature on the number line.

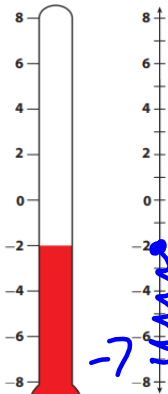
- C** A drop in temperature of 5° is like adding  $-5^\circ$  to the temperature.

Count on the number line to find the final temperature. Mark the temperature now on the number line.

- D** What is the temperature written as an integer?  
-7

The temperature is 7

above/ below zero.



Temperature (°F)

**Reflect**

- What If?** Suppose the temperature is  $-1^\circ\text{F}$  and drops by  $3^\circ\text{F}$ . Explain how to use the number line to find the new temperature.

go down 3 units from -1

- Communicate Mathematical Ideas** How would using a number line to find the sum  $2 + 5$  be different from using a number line to find the sum  $-2 + (-5)$ ?

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Aug 27-4:29 PM

**LESSON**  
**17.1** **Adding Integers with  
the Same Sign**

**RULE #1** Adding with the **SAME** sign.

Add the numbers normally, just keep the sign at the end!

Ex.  $6+8 = 14$        $-6 + (-8) = -14$

**Warning:** Do not be scared by the ( )!! They just keep the negative and the number together.

Jul 9-8:23 PM

**YOUR TURN**

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Find each sum.

7.  $-8 + (-1) = \underline{-9}$

8.  $-3 + (-7) = \underline{-10}$

9.  $-48 + (-12) = \underline{-60}$

10.  $-32 + (-38) = \underline{-70}$

11.  $109 + 191 = \underline{300}$

12.  $-40 + (-105) = \underline{-145}$

13.  $-150 + (-1500) = \underline{-1650}$

14.  $-200 + (-800) = \underline{-1000}$

Same Signs add and keep

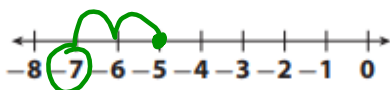
Jul 11-2:32 PM

Model each addition problem on the number line to find each sum.

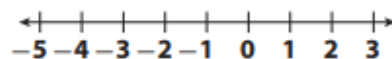
pg. 498

(Explore Activity 2)

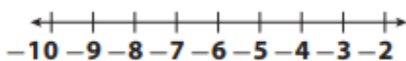
3.  $-5 + (-2) = \underline{-7}$



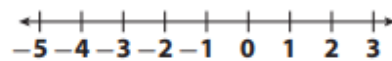
4.  $-1 + (-3) = \underline{\hspace{2cm}}$



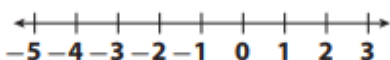
5.  $-3 + (-7) = \underline{\hspace{2cm}}$



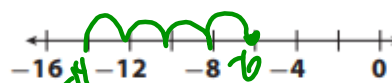
6.  $-4 + (-1) = \underline{\hspace{2cm}}$



7.  $-2 + (-2) = \underline{\hspace{2cm}}$



8.  $-6 + (-8) = \underline{-14}$



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LESSON  
**17.2** Adding Integers with  
Different Signs

What happens when you add opposites?

$$-6 + 6 = 0 \quad 30 + (-30) = 0$$

Mar 18-9:15 AM

Modeling Addition with Different Signs

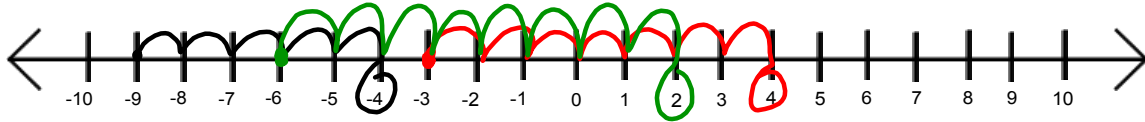


$7 + (-5) =$

$9 + (-5) =$

Jul 11-2:34 PM

## Using a Number Line



Positive means to the right.

Negative means to the left.

$$-9 + 5 = -4$$

$$-6 + 8 = 2$$

$$-3 + 7 = 4$$

$$10 + (-10) = 0$$

-10 to 10 number line

## RULE #2 Adding with DIFFERENT signs

Subtract the numbers normally, keep the sign of the higher number.

Ex.  $-15 + 8$  — Which is higher? —  $-12 + -27$

$15 - 8$  — Subtract normally —  $27 - 12$

$-7$  — Keep the sign of the higher number —  $-15$

**Warning:** Don't freak out! You can always use the number line or the modeling!

[https://www.youtube.com/watch?v=hz\\_ndxvJzws](https://www.youtube.com/watch?v=hz_ndxvJzws)



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Model and find each sum using counters. Part A is modeled for you. For Part B, follow the steps to model and find the sum using counters.

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**A** Model  $3 + (-2)$ .

Start with 3 positive counters to represent 3.

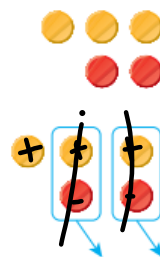
Add 2 negative counters to represent adding  $-2$ .

**Ax** Form zero pairs.

What is left when you remove the zero pairs?

1 + counter

Find the sum:  $3 + (-2) = \underline{1}$



The value of a zero pair is 0. Adding or subtracting 0 to any number does not change its value.

**B** Model  $-6 + 3$ .

Start with 6 - counters to represent -6.

Add 3 + counters to represent adding 3.

Form zero pairs.

What is left when you remove the zero pairs?

3 - counters

Find the sum:  $-6 + 3 = \underline{-3}$



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**YOUR TURN** 

Model and find each sum using counters.

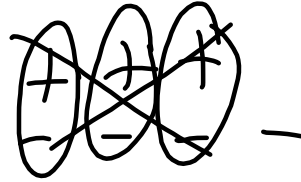
3.  $5 + (-1)$  \_\_\_\_\_

4.  $4 + (-6)$      -2    



5.  $1 + (-7)$  \_\_\_\_\_

6.  $3 + (-4)$      -1    



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## Homework

pages 504 - 505

1 - 29 ODD

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