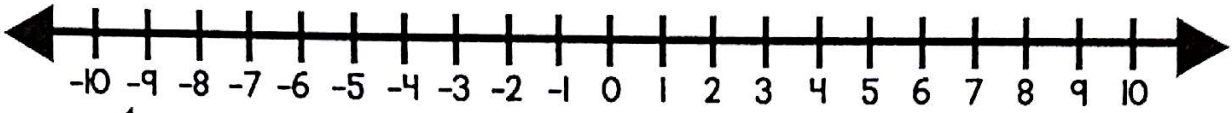Name _____   Class _____   Date **Aug 31 Notes**

Integers and Number Lines

Integers less than zero are ___negative___ integers.
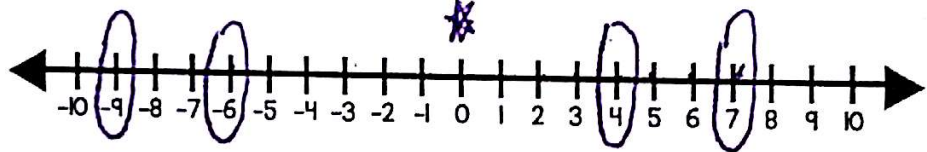
Integers greater than zero are ___positive___ integers.

Note: Fractions, decimals, and other rational numbers can also be ___positive___ or ___negative___.

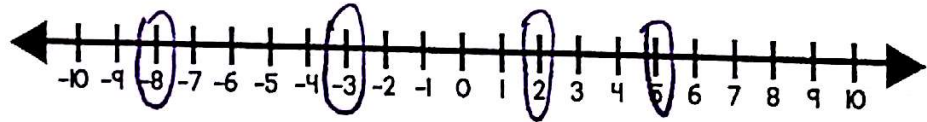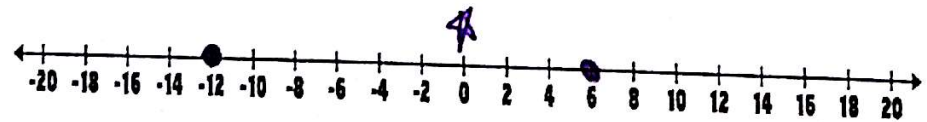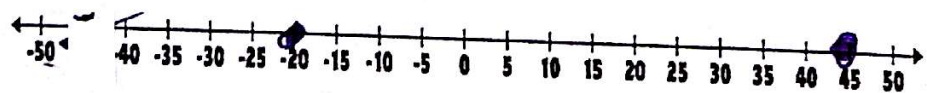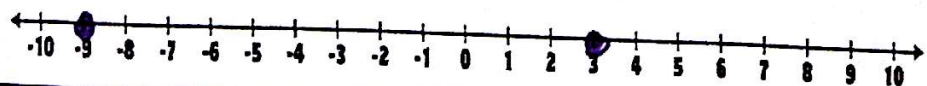| Locating Integers	
1. If the number is less than zero or has a negative sign in front of it, look at numbers to the left of zero. 2. If the number is greater than zero or has a positive sign in front of it, look at numbers to the right of zero. *Usually, you will have to locate and graph an integer at the same time.	1. Locate and circle -9, +4, -6, and +7 on the number line. 2. Locate and circle 5, -8, 2, and -3 on the number line.
Graphing (plotting) integers 1. Locate the integer on the number line. 2. Draw a dot on the mark on the number line.	3. Locate and graph -12 and +6 on the number line. 4. Locate and graph 45 and -20 on the number line. 5. Locate and graph -9 and 3 on the number line.

Integers and Number Lines 1

Comparing integers	6. Graph -5, -18, and -11 on the number line below. Circle the number that has the lowest value.
1. Locate and graph the integers on a number line (this step may already be completed in the scenario).	
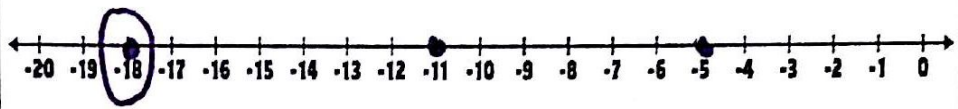
7. The table below shows the low temperatures for Monarch, Ohio, for five days. Graph the temperatures on the number line.

Day	Monday	Tuesday	Wednesday	Thursday	Friday
Temperature (°F)	1	-4	-1	3	-2

2. Compare based on math prompt (what the problem asks you to compare).

Remember that numbers increase in value from left to right and decrease in value from right to left.

What day shows the highest temperature? **Thursday**

Ordering Integers

1. Locate and graph numbers on the number line (this step may already be completed in the scenario).

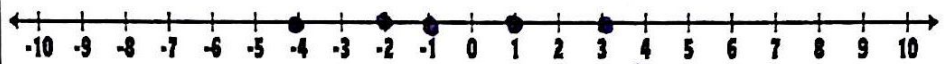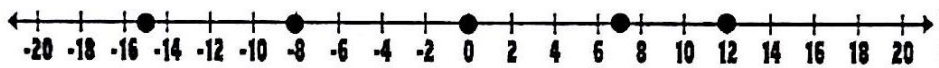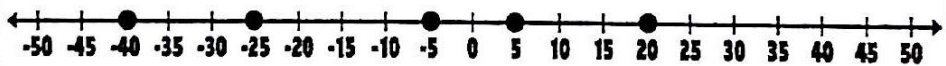2. Order based on math prompt (what the problem asks you to order).

Remember that numbers increase in value from left to right and decrease in value from right to left.

8. Order the integers graphed on the number line from greatest to least.

12, 7, 0, -8, -15

9. Order the integers graphed on the number line from least to greatest.

-40, -25, -5, 5, 20


Modeling Integer Operations (overview)

There are two popular ways to model integer operations using number lines.

The examples show two ways to model -7 + 10. Both models will show that the value of the expression is 3.

Method One: Start at the first number. Draw a ray the length of the second number (negative = go left; positive = go right). The position of the ray's tip represents the sum or difference.
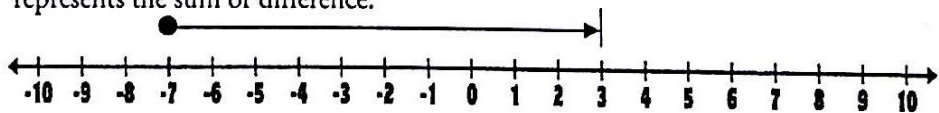
Method Two: Start at zero. Draw a ray the length of the first number (negative = go left; positive = go right). Draw a mark above the first integer. Draw another ray the length of the second number. The position of the second ray's tip represents the sum or difference.
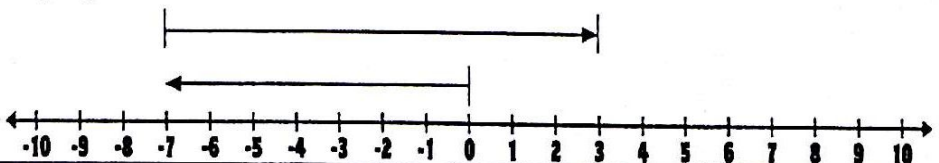
Integers and Number Lines 2
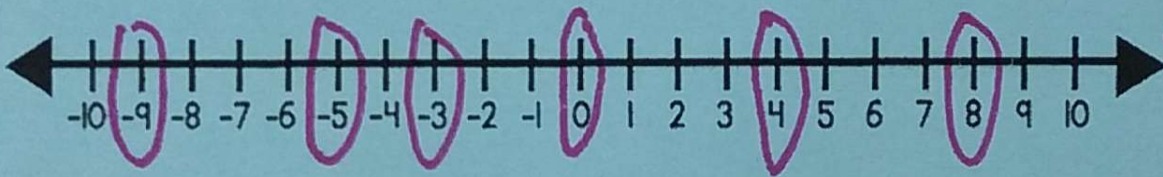
Name _____
Class _____
Date *Aug. 31*

1. Locate and graph the following integers on the number line: 0, -9, 4, -5, -3, 8

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

2. What is the order of the integers from greatest to least?

8, 4, 0, -3, -5, -9