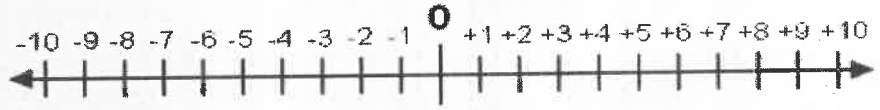
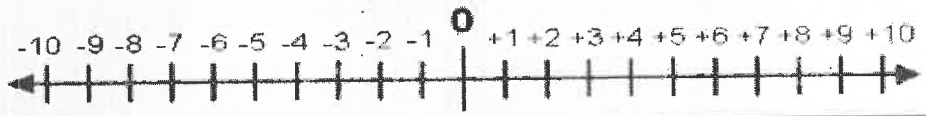
Name _____ Ms. Abadie's _____ Period

Chapter 1	**Integers:** a positive or negative whole number that can be written as a fraction with a denominator of 1. Rational Number: anything that can be written as a fraction. Sum: add Difference: subtract Product: answer to multiplication Quotient: answer to division
MAFS.6.NS.3.7	Understand ordering and absolute value (the distance from zero) of integers (positive and negative whole numbers.)
Essential Question	What is absolute value? In this lesson I am *defining absolute value*, so I can *use it to simplify expressions.*
1.1 Absolute Value	Absolute value is the distance a number is away from zero. *Notation:* the absolute value of *a* is written as |a|
Homework: 1.1 Practice A #1-4	**Find the absolute value.** **1.** $\|7\|$ **2.** $\|-1\|$ **3.** $\|-5\|$ **4.** $\|14\|$
Homework: 1.1 Practice A #5-7	**Copy and complete the statement using <, >, or =.** **5.** $\|-2\|$ ____ -1 **6.** -7 ____ $\|6\|$ **7.** $\|10\|$ ____ 11 **8.** 9 ____ $\|-9\|$
	One fish is 4 feet below sea level. Another fish is 3 feet below sea level. Write each position as an integer. Which integer is greater?

MAFS.7.NS.1.1	Apply and extend previous understandings of addition and subtraction to add and subtract rational numbers (any number that can be written as a fraction- includes integers); represent addition and subtraction on a horizontal or vertical number line diagram; describe situations in which opposite quantities combine to make 0.
Essential Question	**How do you add integers?** In this lesson I am *using counters, number lines, or rules to understand adding integers*, so I can *use it to simplify expressions.*
1.2 Adding Integers	**Adding integers with the same signs= add, keep sign** **Adding integers with different signs= subtract, use bigger sign**
Opposites	**Two numbers that are the same distance from 0, but on opposite sides of 0.** *Example:* 7 and -7
Additive Inverse	**A number and its opposite always sum (add) to zero.** *Example:* 7+ (-7) = 0
"Same signs, add and keep" **Homework:** 1.2 Practice A #1-12	**Add.** **1.** $7 + 13$ **2.** $-8 + (-5)$ **3.** $-20 + (-15)$
"Different signs, subtract"	**Add.** **4.** $-2 + 11$ **5.** $9 + (-10)$ **6.** $-31 + 31$
	You start hiking at an elevation that is 80 meters below base camp. You increase your elevation by 42 meters. What is the new elevation with respect to base camp?
	4 + 3 = ____  **7 + (-3) = ____**  **-6 + (-3) = ____** 

MAFS.7.NS.1.1	Understand subtraction of rational numbers as adding the additive inverse, $p - q = p + (-q)$.
Essential Question	**How do you subtract integers?** In this lesson I am *using a rule called "adding the opposite"*, so I can see *subtraction as adding and use rules I already know to solve expressions.*
1.3 Subtracting Integers	**"add the opposite"** (make the minus a plus and take the opposite sign of the number behind it) then use rules from adding *Example:* 3 – 4 = 3 + (-4) = -1
Homework: 1.3 Practice A #1-12	**Subtract.** **1.** $8 - 3$ **2.** $9 - 17$ **3.** $-3 - 3$ **4.** $-14 - 9$ **5.** $9 - (-8)$ **6.** $-12 - (-12)$
Homework: 1.3 Practice A #16-24	**Evaluate the expression.** **7.** $-9 - 16 - 8$ **8.** $-4 - 20 - 9$ **9.** $0 - 9 - (-5)$ **10.** $-8 - (-6) - 0$ **11.** $15 - (-20) - 20$ **12.** $-14 - 9 - 36$
Homework: 1.3 Practice A #29	**13.** The highest elevation in Mexico is 5700 meters, on Pico de Orizaba. The lowest elevation in Mexico is -10 meters, in Laguna Salada. Find the range of elevations in Mexico.
	The temperature falls from 3°C to -4°C. What is the difference in these temperatures?
	At 8: 00, the temperature was 6 degrees Celsius (°C). Three hours later, the temperature was -13°C. By how many degrees Celsius did the temperature change?

MAFS.7.NS.1.2	Apply and extend previous understandings of multiplication to multiply rational numbers.
Essential Question	How do you multiply integers? In this lesson I am *using a sign rule*, so I can *use it to multiply expressions*.
1.4 Multiplying Integers	Same signs- multiply numbers and get a positive answer Different signs- multiply numbers and get a negative answer
Homework: 1.4 Practice A #1-12 And #14-19	**Multiply.** **1.** $5 \cdot 5$ **2.** $4(11)$ **3.** $-1(-9)$ **4.** $-7 \cdot (-8)$ **5.** $12 \cdot (-2)$ **6.** $4(-6)$ **7.** $-10(-6)(0)$ **8.** $-7 \cdot (-5) \cdot (-4)$
Homework: 1.4 Practice A #20-28	**Evaluate the expression.** **9.** $(-3)^2$ **10.** $(-2)^3$ **11.** -7^2 **12.** -6^3
Homework: 1.4 Practice A #31	**13.** A manatee population decreases by 15 manatees each year for 3 years. Find the total change in the manatee population.

MAFS.7.NS.1.2	Apply and extend previous understandings of division to divide rational numbers.
Essential Question	How do you divide integers? In this lesson I am *using a sign rule*, so I can *use it to divide expressions.*
1.5 Dividing Integers	Same signs- divide numbers and get a positive answer Different signs- divide numbers and get a negative answer
Homework: 1.5 Practice A #1-12	**Divide.** **1.** $14 \div 2$ **2.** $-32 \div (-4)$ **3.** $-40 \div (-8)$ **4.** $0 \div (-6)$ **5.** $\frac{-49}{7}$ **6.** $\frac{21}{-3}$
	Evaluate the expression when $a = -18$ and $b = -6$. **7.** $a \div b$ **8.** $\frac{a+6}{3}$ **9.** $\frac{b^2}{a} + 4$
Homework: 1.5 Practice A #21	**10.** The height of the tide at the Bay of Fundy in New Brunswick decreases 36 feet in 6 hours. What is the mean hourly change in the height?

Find the mean of the integers.

11. 5, −15, 7, −13, 1

12. −21, −34, −37, −52, −56

13. −3, −1, 0, 1, 3

14. The table shows the temperature in Des Moines, Iowa, for certain times during a particular day.

Time	3 A.M.	8 A.M.	1 P.M.	5 P.M.	10 P.M.
Temperature	−15°F	−6°F	22°F	10°F	−11°F

a. What are the high and low temperatures?

b. Find the range of temperatures.

c. Find the change in temperature from 5 P.M. to 10 P.M.

d. Based on the given five temperatures, what is the average temperature for the day?

e. Explain why your answer to part (d) is not an accurate average temperature for the day.