Foundations of Algebra	Unit 1: Number Sense & Quantity				Practice			
Day 3: Real World Applications of Integers	Name:							
Practice Assignment		0	25	50	75	100		
							-	

1. List the following temperatures in order from least to greatest:

- a. The temperature was 25 degrees below zero.
- b. The pool temperature was 78 degrees Fahrenheit.
- c. Water freezes at 32 degrees Fahrenheit.

d. The low temperature in December is -3 degrees Fahrenheit.

e. The temperature in the refrigerator was 34 degree Fahrenheit.

2. Write an integer to represent each situation:

- a. _____ moving backwards 4 spaces on a game board
- b. _____ going up 3 flights in an elevator
- c. _____ a 5 point penalty in a football game
- d. _____ a \$1 increase in your allowance

3. Think of the days of the week as integers. Let today be 0 and let the days in the past be negative and days in the future be positive.

- a. _____ If today is Tuesday, what integer stands for last Sunday?
- b. _____ If today is Wednesday, what integer stands for the coming Saturday?
- c. _____ If today is Friday, what integer stands for last Saturday?
- d. _____ If today is Monday, what integer stands for next Monday?

4. A small dog that can jump 5 feet off the ground chases a squirrel across the yard towards a tree. The squirrel runs 8 feet up the tree trunk, and then cautiously walks back down 5 feet to see how close the dog is. Seeing the dog closing in, the squirrel then scurries up 3 feet before the dog reaches the tree.

a. Write a number sentence for the situation:

b. Is the dog able to catch the squirrel? Explain.

5. A submarine was situated 450 feet below sea level. If it descends 300 feet, what is its new position? Express your answer as an integer and in real world terms.

6. In Buffalo, New York, the temperature was 14 degrees below zero. If the temperature dropped 7 degrees, what is the temperature now?

Foundations of Algebra

Unit 1: Number Sense & Quantity

Practice

7. Cody, Ty, and Brandon work in a shaft coal mine. The elevator in the mine shaft travels down at a rate of 150 feet per minute. Each day, Ty descends into the mine using a vertical elevator. He rides the elevator straight down into the mine for 4 minutes.



a. Write a number sentence for the situation:

b. How far did Ty travel down into the mine? Express your answer as an integer and in real world terms.

130

> 30 20

> > 10

30

c. If Ty traveled down 1200 feet, how many minutes was he on the elevator? Write a number sentence and then state your answer.

- 8. Which of the following situations would result in a value of 0? Explain why.
 - a. Sarah has \$50 and pays \$40 for two pairs of shoes.
 - b. Matt sells 22 out of his 24 candy bars.
 - c. Grayson earned \$15 for his allowance and then has to pay his \$15 class dues.
 - d. Kiki exercises for 30 minutes on Tuesday and then another 30 minutes on Thursday.
- 9. Use the thermometer at the right to answer the following questions:

a. In South Dakota, the temperate went from -33°F to 50°F. How many degrees did the temperature rise?

b. In Montana, the temperate went from 44°F to -56°F. How many degrees did the temperature fall?

c. In Idaho, the temperature went from 55°F to 8°F. How many degrees did the temperature fall?