Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Unit 1 Study Guide

Directions: Solve the following problems. Show your work.

1. 5 + -6 = 2. -5 + -4 =

3. 9 + -3 = 4. 8 – 13 =

5. -5 – -4 = 6. 4 \* (6 – 20)=

7. 8 + (7² - 9x) – (x + 3) for x= 2 8. 3m – 5(m + 15) for m= -3

Directions: Compare using >, <, or = to complete the statements

9. |-20| \_\_\_\_ -9 + 29 10. - |-8 \* -5| \_\_\_ - |-30 – 6|

11. -15(-3) + 4 \_\_\_\_ -3(24 + -44) 12. -6(-12) + 8(-7) \_\_\_\_ 9 \* -2(7 – 2)

Directions: Simplify the expressions

13. -6(12x + 4) – 5x + 5 14. 4 + 9y² – 4(11y² + 3)

Directions: Solve the following problems. Remember include a label and answer the entire question.

15. To make t-shirts, the company charges a $15 setup fee plus $12 per shirt. Write an algebraic expression for the cost of s number of shirts. What is the cost of 5 shirts?

16. The highest temperature recorded in the town of Westgate this summer was 77°F. Last winter, the lowest temperature recorded was –12°F. Find the difference between these extremes.

17. Your job pays $12 per hour. Write an expression for your pay in dollars for working **h** hours and find how much you would make if you work 9 hours?

18. To print tickets, a printer charges a $65 setup fee plus $1.00 per ticket. Write an algebraic expression for the cost of *t* tickets. What is the cost of 350 tickets?

19. Write the integers 4, –5, 7, –7, 8, and 1 in order from least to greatest, and then plot each of them on a number line.

20. Jim owes his friend $15 for lunch last week. The following week he borrows another $8, but then pays back his friend $20. Write an integer to represent if Jim owes his friend money still or if his friend owes him money now.