Algebra II
Practice Test – Unit One

Name_____Period_____Date_____

Vocabulary: Define each word and give an example.

1. Irrational Number

2. Reciprocal

3. Coefficient

4. Absolute Value

Short Answer:

5. Write the associative property of multiplication and illustrate with a numerical example.

6. Write the formula for the area of a trapezoid. Use a diagram to define the variables.

Review:

7. Find the difference of -5 and 8.

8. Find the area of a rectangle with sides 12 in and 5 in.

9. Between what two integers is $-\sqrt{27}$?

Problems:
Be sure to show all work used to obtain your answer. Circle or box in the final answer.

10. Graph the numbers on a number line: $-\frac{7}{2}, 1.8, \sqrt{6}, -\sqrt{36}, \pi$

11. Evaluate the expression: $9-6(18-20)^2$

12. Evaluate the expression $3x^2-(4+8x)$ when $x=-2$.

13. Simplify the expression: $-(y-4x)+6x-10y$

14. Solve the following equations. Check your solution.

    a. $\frac{1}{4}(x-2)=8$

    b. $3(6x-1)=10x+11$

    c. $2|x-8|+10=20$

15. Solve the equation for y: $-3x-9y=15$

16. Solve for *C*: $F=\frac{9}{5}C+32$

17. Solve for *A*: $B=\frac{3}{5}(A+8)$

18. For 1980 through 1990, the average salary, *A*, (in thousands of dollars), of assistant principals at public high schools can be modeled by $A=2t+25$, where $t=0$ represents 1980. Approximate a high school assistant principal's salary in 1983.

19. An awards dinner costs $225 plus $5 for each person making reservations. The total bill is $735. How many people made reservations?

20. Jeff earns $4.00 an hour baby-sitting. He is saving to buy a pair of in-line skates that costs $116.00. If Jeff already has $60.00 saved, how many hours must he baby-sit in order to buy the skates?

21. Solve the inequality. The graph your solution on a number line.

    a. $-2x+5<9$

    b. $2x+5<2-(x-9)$

    c. $-8\le 2x-4<8$

    d. $|3x-2|\ge 4$