Algebra 1   Name: _____
Worksheet 1.5
Translating Expressions   Date: _____Period:_____

Write each phrase as an algebraic expression.

1. 12 more than a number

2. The quotient of a number and 9

3. 4 times a number cubed decreased by 7

4. 15 less than a number squared

5. 3 more than 5 times the number of dogs

6. The product of 5 and y added to 3

7. 4 times the number of cows plus 2 times the number of ducks

Write a verbal expression for each algebraic expression.

8. 23f

9. 7^3

10. 5x + 8

11. 6 – 4y

12. $\dfrac{3x}{7}$

13. $4d^3 - 10$

14. 4(2x – 7)

Translate each sentence into an equation.

15. Fifty-three plus four times c is as much as 21.

16. The sum of five times h and twice g is equal to 23.

17. One fourth the sum of r and ten is identical to r minus 4.

18. Three plus the sum of the squares of w and x is 32

19. The area A of a circle is pi times the radius r squared.

Translate each equation into a verbal sentence.

20. $g + 10 = 3g$

21. $2p + 4q = 20$

22. $4(a + b) = 9a$

23. $8 - 6x = 4 + 2x$

24. $s^2 - n^2 = 2b$

Match each inequality with its corresponding statement.

_____ 25. $-4n = 5$ a. Three times a number is equal to five.

_____ 26. $\dfrac{4}{5}n = 5$ b. Two fifths of a number is the same as seven.

_____ 27. $4n = 5$ c. Four times a number is identical to five.

_____ 28. $\dfrac{2}{5}n = 7$ d. Negative four times a number is five.

_____ 29. $3n = 5$ e. Negative four times a number is the opposite of five.

_____ 30. $-4n = -5$ f. Four fifths of a number is equivalent to five.

Review.
Determine all of the number sets to which each number belongs.

I. Natural numbers	II. Whole numbers	III. Integers
IV. Rational numbers	V. Real numbers	VI. Irrational numbers

31. $\sqrt{7}$ 32. -3 33. $.87$

Evaluate each expression if $y_1 = 8$, $y_2 = -3$, $x_1 = -4$, $x_2 = 6$

34. $\dfrac{y_2 - y_1}{x_2 - x_1}$ 35. $\dfrac{y_1 - y_2}{x_1 - x_2}$