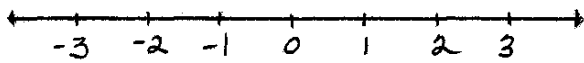


1. Check each column that applies.

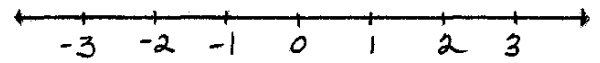
	Natural	Whole	Integer	Rational	Irrational	Real
-2.73						
$-\frac{2}{3}$						
$\sqrt{11}$						
0						
-8						

Graph each of the following sets of number on the real number line.

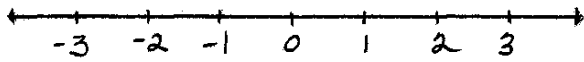
2. {the real numbers between -3 and 2}



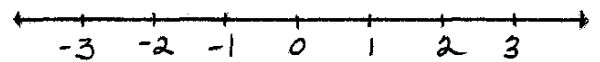
3.  $\{Z < 0\}$



4. {natural numbers greater or equal to 1}



5. {real numbers less than -2}



True/False. Write out the correct word in each blank.

6. \_\_\_\_\_ The absolute value of 6 is -6.      6 \_\_\_\_\_  $\frac{8}{5}$  is an integer.  
 7. \_\_\_\_\_  $-8 - (-3) = -8 + 3$       8. \_\_\_\_\_  $\sqrt{27}$  is a rational number  
 9. \_\_\_\_\_ All rational numbers are irrational numbers.      10. \_\_\_\_\_  $5 + 3^2 = (5 + 3)^2$

Simplify each expression.

11.  $8 + 24 \div 2 + 6 =$       12.  $32 \div 8 \cdot 2 =$       13.  $(4 + 2 \cdot 3) - 7 + 4^2 =$   
 14.  $\frac{5 \cdot 4 + 4}{2(1 + 3)} =$       15.  $-6 - 8 - (-4) =$       16.  $9(7 - 4) - 9 =$   
 17.  $-4[-5 - (-2)] =$       18.  $8 + (-4) + (-12) =$       19.  $8^2 + 6 \div 2 =$   
 20.  $|8 - 12| =$       21.  $|8| - |12| =$       22.  $-5(15) =$

23.  $(-12)(-4) =$

24.  $-300 \div (-3) =$

25.  $-(-7)^2 =$

26.  $-4(3+6) =$

27.  $\frac{48}{-6} =$

28.  $-2(x+7) =$

29.  $(x+9)(6) =$

Simplify. Combine like terms when necessary.

29.  $3(4x+2x-5) =$

30.  $8-x-3 =$

31.  $6(3-y)-2y =$

32.  $m^2+7m-5+5m^2+2m+19 =$

33.  $7y-6+3y =$

Evaluate each expression when  $w = -3$ ,  $x = 6$ ,  $y = 4$ , and  $z = -3$ . (5 points each)

34.  $x-y(w+z) =$

35.  $y+|w-z| =$

36.  $6xy-z^2 =$

$$\begin{bmatrix} a & b \\ c & d \\ e & f \end{bmatrix}$$

37. What are the dimensions of the matrix to the left?

38. What is a called in the matrix?

39. Is it possible to add these 2 matrices? Explain.

$$\begin{bmatrix} -2 & 3 \\ 1 & -3 \\ -1 & 4 \end{bmatrix} \quad \begin{bmatrix} 5 & -1 \\ 4 & 1 \end{bmatrix}$$

SIMPLIFY

40.  $\begin{bmatrix} -2 & 3 \\ 1 & -3 \\ -1 & 4 \end{bmatrix} + \begin{bmatrix} 1 & -6 \\ 5 & -2 \\ 4 & -2 \end{bmatrix}$

41.  $\begin{bmatrix} -2 & 3 \\ 1 & -3 \\ -1 & 4 \end{bmatrix} - \begin{bmatrix} 1 & -6 \\ 5 & -2 \\ 4 & -2 \end{bmatrix}$

Write an algebraic expression for each of the following.

42.  $x$  more than 5

43. The product of 5 and a number

44. The difference of 7 and  $x$ .45. the quotient of  $m$  and 7

46. 6 less than twice a number