***Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_***

Directions: Please show all of your work. You may not use a calculator for #’s 1 – 20.

***ALGEBRA 1 SKILLS REVIEW***

***Order of Operations***

Evaluate the expression.

\_\_\_\_\_\_\_\_\_\_\_1.)  \_\_\_\_\_\_\_\_\_\_\_2.) 

\_\_\_\_\_\_\_\_\_\_\_3.)  \_\_\_\_\_\_\_\_\_\_\_4.) 

\_\_\_\_\_\_\_\_\_\_\_5.)  \_\_\_\_\_\_\_\_\_\_\_6.) 

\_\_\_\_\_\_\_\_\_\_\_7.)  \_\_\_\_\_\_\_\_\_\_\_8.) 

\_\_\_\_\_\_\_\_\_\_\_9.)  \_\_\_\_\_\_\_\_\_\_\_10.) 

***Variable Expressions***

Evaluate the expression when *a* = 10, *b* = 9, *c* = 4 and *d* = -5

\_\_\_\_\_\_\_\_\_\_\_11.)  \_\_\_\_\_\_\_\_\_\_\_12.) 

\_\_\_\_\_\_\_\_\_\_\_13.)  \_\_\_\_\_\_\_\_\_\_\_14.) 

\_\_\_\_\_\_\_\_\_\_\_15.)  \_\_\_\_\_\_\_\_\_\_\_16.) 

\_\_\_\_\_\_\_\_\_\_\_17.)  \_\_\_\_\_\_\_\_\_\_\_18.) 

\_\_\_\_\_\_\_\_\_\_\_19.)  \_\_\_\_\_\_\_\_\_\_\_20.) 

***Combining Like Terms***

*Evaluate the expression.*

\_\_\_\_\_\_\_\_\_\_\_21.)  \_\_\_\_\_\_\_\_\_\_\_22.) 

\_\_\_\_\_\_\_\_\_\_\_23.)  \_\_\_\_\_\_\_\_\_\_\_24.) 

\_\_\_\_\_\_\_\_\_\_\_25.)  \_\_\_\_\_\_\_\_\_\_\_26.) 

\_\_\_\_\_\_\_\_\_\_\_27.)  \_\_\_\_\_\_\_\_\_\_\_28.) 

***Distributive Property***

*Use the distributive property to rewrite the expression without parentheses.*

\_\_\_\_\_\_\_\_\_\_\_29.)  \_\_\_\_\_\_\_\_\_\_\_30.) 

\_\_\_\_\_\_\_\_\_\_\_31.)  \_\_\_\_\_\_\_\_\_\_\_32.) 

\_\_\_\_\_\_\_\_\_\_\_33.)  \_\_\_\_\_\_\_\_\_\_\_34.) 

\_\_\_\_\_\_\_\_\_\_\_35.)  \_\_\_\_\_\_\_\_\_\_\_36.) 

***Comparing Numbers***

*Write the real numbers from least to greatest.*

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_37.) 

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_38.) 

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_39.) 

*Identify the number that is given. Circle ALL that apply.*

40.) Define the following:

 a) Natural (or Counting) Numbers:

 b) Whole Numbers:

 c) Integers:

 d) Rational Numbers:

 e) Irrational Numbers:

 f) Real Numbers:

41.) Identify the following numbers as rational, irrational, real, whole, integer, or natural. Please write all that apply.

 a) 1.417

 b) 

 **c)** 

 d)$1\frac{2}{3}$

 **e)** 

 **f)**  

***Properties***

**State each property being demonstrated. Each property from the word bank will be used.**

Commutative Property of Addition Associative Property of Addition

Commutative Property of Multiplication Associative Property of Multiplication

Identity Property of Addition Identity Property of Multiplication Zero Product Property

$42. 3b\left(1\right)=3b$ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

$43. 10+d+5=10+5+d$ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

$44. –3\left(4x\right)=\left(-3\*4\right)x $ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

$45. –2+\left(1+x\right)=\left(-2+1\right)+x $ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

$46. 5a+0=5a$ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

$47. \left(6\right)\left(y\right)\left(15\right)=\left(6\right)\left(15\right)\left(y\right)$ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

$48. \left(4w-3\right)\*0=0$ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 ***Formulas***

 *Solve for the indicated variable*.

49)  Solve for . 50)  Solve for r.

51)  Solve for F. 52)  Solve for y.

53)  Solve for y.

***Solving Linear Equations***

*Solve each equation.*

54)  55) 

56)  57) 

58)  59) 

60)  61) 

62)  63) 

***Linear Inequalities***

*Solve and graph each inequality.*

64) 

65) 

66) 

67) 

68) 

69) 

70) 

**ANSWER KEY**

1. 9
2. 11
3. 9
4. 4) -16

5) 27

6) 10

7) 0.125

8) 3

9) 

10) 27

11) 23

12) 8.2

13) 11

14) 10,036

15) -58

16) 48.3

17) 24

18) 36

19) 

20) 230

21) 

22) 

23) 

24) 

25) 

26) 

27) 

28) 

29) 

30) 

31) 

32) 

33) 

34) 

35) 

36) 

37) 

38) 

39) 

40) a) 1,2,3,4,5….

b) 0,1,2,3,4,5,…

c) Whole numbers and their opposites (…-3,-2,-1,0,1,2,3,…)

d) A number that can be written as the quotient of two integers

e) A number that cannot be written as the quotient of two integers

f) The set of numbers consisting of the positive numbers, negative numbers, and zero. (rational and irrational numbers)

41) a) real, rational

 b) real, irrational,

 c) real, rational, integer whole number, natural number

 d) real, rational

 e) real, irrational

 f) real, rational

42) Identity Property of Multiplication

43) Commutative Property of Addition

44) Associative Property of Multiplication

45) Associative Property of Addition

46) Identity Property of Addition

47) Commutative Property of Multiplication

48) Zero Product Property

49) 

50) 

51) 

52) 

53) 

54) 

55) 

56) 

57) 

58) 

59) 

60) 

61) 

62) 

63) No Solution

For #64-70, check student graphs.

64) 

65) 

66) 

67) 

68) 

69) 

70) 