Name Answer Key

PreCalc; Translating Phrases

Write the following using math notation (numbers & symbols).

Example:	Write:
"Eight plus four equals twelve"	$8 + 4 = 12$

1. "Seven minus two equals five"
   $7-2=5$
2. "Nine times three equals twenty-seven"
   $9 \cdot 3 = 27$ $9 \times 3 = 27$ $9(3) = 27$
3. "Six divided by two equals three"
   $\frac{6}{2} = 3$ $6/2 = 3$ $6 \div 2 = 3$
4. "Square root of x"
   $\sqrt{x}$
5. "x squared"
   x^2
6. "y cubed"
   y^3
7. "z to the fourth power"
   z^4
8. "One half"
   $\frac{1}{2}$ 0.5
9. "Two thirds"
   $\frac{2}{3}$ $0.\overline{6}$
10. "Four ninths"
    $\frac{4}{9} = 0.\overline{4}$
11. "The quantity of x minus one times the quantity of x plus two"
    $(x-1)(x+2)$
12. "x plus three all over x"
    $\frac{x+3}{x}$ $(x+3)/x$ $(x+3) \div x$
13. "x greater than four"
    $x > 4$
14. "x less than five"
    $x < 5$
15. "x less than or equal to six"
    $x \leq 6$
16. "x less than or equal to seven"
    $x \leq 7$
17. "One million five hundred and six thousand four hundred ninety one"
    $1,506,491$
18. "Plus or minus ten"
    ± 10

Math Operations

"plus"

"minus"

"times"

"divided by"

Fractions

$\frac{5}{6}$

"Five sixths" or "Five over six"

Parenthesis

$(x + y)$

"The quantity x plus y"

or

"x plus y all ..."

Write or draw an example of the following.

1. Fraction

$\frac{a}{B}$

2. Decimal

0.725

3. Variable

X

4. Constant

5

5. Coefficient

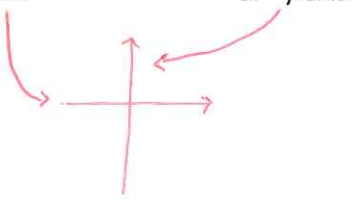
$4a$

6. Equation

$A+B=C$

7. x-axis

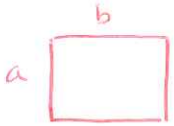
8. y-axis



9. Formula

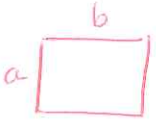
$A=l \cdot w$

10. Perimeter



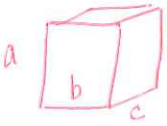
$P=2a+2B$

11. Area



$A=ab$

12. Volume



$V=abc$

Below are some key direction words you will use this year. What do the following words mean?

1. Simplify

Reduce

2. Evaluate

Solve.

3. Solve

find an answer to the problem

4. Factor

split a polynomial into pieces (essentially divide)

5. Graph

Draw the picture

Fill in the Blank – Use your vocabulary list and knowledge of the definitions and examples to complete the following statements with the correct word.

1. The reciprocal of any nonzero number b is $\frac{1}{b}$.
2. A(n) formula is an equation that relates two or more quantities.
3. In the equation $y = x + 5$, x is the independent variable and y is the dependent variable.
4. The slope of a non-vertical line is the ratio of vertical change to horizontal change.
5. The linear equation $y = 2x + 5$ is written in slope-intercept form.
6. The linear equation $6x + 8y = 72$ is written in STANDARD form.
7. The point (h, k) is the vertex of the graph of $y = a|x - h| + k$.
8. The graph of a quadratic function is called a(n) parabola.
9. A quadratic function in the form $y = a(x - h)^2 + k$ is in vertex form.
10. When you add or subtract polynomials, you add or subtract the coefficients of the like terms.
11. For the equation $(x - 1)^2(x + 2) = 0$, a(n) multiple solution is 1 because the factor $x - 1$ appears twice.
12. The function $h(x) = g(f(x))$ is called the composition of the function g with the function f.
13. Square root function and cube root functions are examples of radical functions.
14. The number e is an irrational number approximately equal to 2.71828.
15. A logarithm with base 10 is called a(n) common logarithm.
16. The equation $5^x = 8$ is an example of a(n) exponential equation.

17. The function $y = \frac{7}{x+4} + 3$ has a(n) range of all real numbers except 3 and a(n) domain of all real numbers except -4.

18. When you write $\frac{x}{3} = \frac{x+2}{5}$ as $5x = 3(x+2)$, you are cross multiplying.

19. The radius of a circle is the distance from any point on the circle to a fixed point called the circle's center.

20. The union or intersection of two events is called a(n) compound event.

21. The probability that B will occur given that A has occurred is called the conditional probability of B given A.

22. Measures of central tendency represent the center or middle of a data set. Measures of dispersion tell you how spread out the values in a data set are.

23. A(n) normal curve is a bell-shaped curve that is symmetric about the mean.

24. A sample for which each member of a population has an equal chance of being selected is a(n) random sample.

25. An angle is in standard position if its vertex is at the origin and its initial side lies on the positive $x - axis$.

26. The graphs of the functions $y = \sin x$ and $y = \cos x$ both have a(n) period of 2π.

27. $\sin 2a = 2 \sin a \cos a$ is called the double angle formula for sine.