



- *20 questions
- *NO Calculators
- *Show all work/steps- use separate paper
- *Recommend time frame 30min -45min

Introduction to Algebra Concepts

1. True or False: equations are mathematical statements that contain an = symbol?
2. Is the difference of 4 and 8 equal to the value of the difference of 8 and 4? (explain)
3. The sum of 10 and 15 is_____
4. The quotient of 10 and 4 is _____
5. The product of 3 and x is_____
6. What symbol is this? \leq
7. A variable can be a symbol other than a letter?
8. With respect to the order of operations, what does P.E.M.D.A.S stand for?
9. Evaluate -2^2 (hint: $(-2)^2$ and -2^2 are not the same in value)
10. Is $x = 20$ the solution to the equation $2x + 10 = 50$? (explain)

Order of Operations

11. $-2 \times 7 + 10 \times 5 - 16 \div 8$

12. $40 \div [(10 - 2) \div (3 \times 4 - 2)]$

13. $5[(6 - 3)^2 + 4 \times 2]$

14.
$$\frac{(6 - 5 \times 3^2 + 1) \div 3}{7 - 2 \times 3}$$

Translating Verbal and Algebraic Phrases

15. Write as an algebraic statement "6 times a number plus 3"

16. Write as a verbal phrase $2(x - y)$

17. Write as an algebraic statement "the difference of z and the product of x and y"

18. Write as a verbal phrase $(x + y) \div w$

19. Write as an algebraic statement "the product of three different numbers is 10"

20. Write as a verbal phrase $x^2 - z^2$