Algebra 1 Chapter 1 Test

Name: _____ Hour: _____ Score: _____/42

Directions: Solve each equation. ***Show all work*** *for full credit.*

1.1 Solving One-Step Equations (1 pt each)

1. x - 6 = -5 x = _____	2. $\frac{y}{4} = -3$ **y** = _____

1.2 Solving two-step equations (2 pts each)

3. -3x – 4 = -10 x = _____	4. $\frac{x}{2} - 6 = 9$ **x** = _____
5. 10w – 5w = 40 w = _____	6. 4z + 9z – 10 = 29 z = _____
7. 6 (2q – 3) = 30 q = _____	8. -5 (n + 4) = 60 n = _____

1.3 Solving multi-step equations (2 pts each)

9. $6x + 6 = 2x - 10$ $x =$ _____	10. $-2y + 5 = 4 (y - 1)$ $y =$ _____
11. $-6 - 2n = -2(3 + n)$ $n =$ _____	12. $6p + 7(p - 2) = -92$ $p =$ _____

1.3b Solving Absolute Value Equations (1 or 2 pts each)

13. $\| k + 3 \| = 6$	14. $\| a - 5 \| = 0$
15. $\| x - 9 \| = -3$	16. $\|x\| = 10$

1.4 Rearrange formulas to highlight a quantity of interest

Solve each equation for the variable specified. (2 pts)

17. $A = b + h$ Solve for **b**

b = _____

18. $F = ma$ Solve for **a**

a=_____

Multiple Choice. Circle your answer. (2 points each)

19. The formula $PV = 300R$ is used in chemistry. How can this formula be solved for ***P***?

F. Divide both sides of the formula by *P*.

G. Divide both sides of the formula by *V*.

H. Subtract *P* from both sides of the formula.

I. Subtract *V* from both sides of the formula.

20. In 10 years, Maria will be 39 years old. Let ***m*** represent Maria's age today. Which equation can be used to find ***m***?

A. $m = 39 + 10$

B. $m - 10 = 39$

C. $m + 10 = 39$

D. $10m = 39$

21. What value of ***x*** makes the equation below true?

$$5x + 9 = x + 20$$

A. 7.25

B. 5.8

C. 2.75

D. 2.2

The following instructions refer to the algebraic expression below. (1 pt each)

4x + 10

22. What is the **coefficient**? _____

23. What is the **constant**? _____

24. What is the **math operation**? _____

25. How many **terms** are in the expression? ____

Algebra 1	**Chapter 1 Test**	**RETAKE**

Name: _____ Hour: _____ Score: _____/42

Directions: Solve each equation. ***Show all work*** *for full credit.*

1.1 Solving One-Step Equations (2 pt each)

1. x + 5 = -25 x = _____	2. $\frac{1}{3}y = -6$ **y** = _____

1.2: Solving Two-Step Equations (2 pts each)

3. 10 = 6 – 2x x = _____	4. $4 + \frac{x}{2} = 10$ **x** = _____
5. 9w – 4w = -30 w = _____	6. 6z + 3 – 8z = 13 z = _____
7. -5 (q – 4) = 35 q = _____	8. 2 (n + 3) = 10 n = _____

1.3 Solving Multi-step Equations (2 pts each)

9. $5x - 2 = 2x + 10$ $x =$ _____	10. $2(y + 4) = 3(y - 2)$ $y =$ _____
11. $-(1 - 5n) = -1 + 5n$ $n =$ _____	12. $4(1 + 4k) - 5 = -81$ $k =$ _____

Objective 6: Solving Absolute Value Equations (1 or 2 pts each)

13. $\lvert x \rvert = 5$	14. $\lvert y - 15 \rvert = -15$
15. $\lvert x - 1 \rvert = 3$	16. $\lvert y + 3 \rvert = 0$

Objective 7: Rearrange formulas to highlight a quantity of interest

Solve the equation for the variable specified. (2 pts)

17. $m - 4k = 8$ Solve for m

18. $a = \frac{F}{m}$ Solve for F

m = _____

F = _____

Multiple Choice. Circle your answer. (2 points each)

15. The formula for the volume of a rectangular prism is V = LWH. Anna wants to make a box with a Length of 7 inches, a Width of 5 inches and a Volume of 210 cubic inches. What variable does Anna need to solve for in order to build her box?

A. V B. L C. W D. H

16. Which situation is best represented by **x − 32 = 8**

A. *Daniel has 32 baseball cards. Joseph has 8 fewer cards than Daniel. How many baseball cards does Joseph have?*
B. *Logan withdrew $32 from her bank account. After her withdrawal, her balance was $8. How much was originally in her account?*
C. *Room A contains 32 desks. Room B has 8 fewer desks. How many desks are in Room B?*
D. *Janelle bought a bag of 32 craft sticks for a project. She used 8 craft sticks. How many craft sticks does she have left?*

17. For which equation is a = 8 a solution?

A. 15 − a = 10 C. a − 24 = -16

B. 10 + a = 23 D. a − 18 = 26

The following instructions refer to the algebraic expression below. (1 pt each)

3y + 12y + 3

18. What are the **like terms?**_____

19. What is the **constant(s)**?_____

20. What are the **coefficient(s)**?_____

21. How many **terms** are in the expression? ____