Honors Algebra 1 Name_____ ID: 1

Chapter PRACTICE Test 0 (2024)

Date_____ Period____

Instructions: Show work clearly. Circle final answer.

Write each as an algebraic expression. The the variable "n" to describe the number. Do NOT evaluate. (2 points each)

EQUATION OR INEQUALITY

unless otherwise Given

1) the difference of 25 and a number

$25 - n$

2) twice x cubed

$2 \cdot x^3$ or $2x^3$

3) the quotient of n and 8 is equal to 45

$n/8 = 45$

4) the product of m and 10 is 23

$m \cdot 10 = 25$ or $10m = 25$

5) the sum of p and 4 is less than 44

$p + 4 < 44$

6) the sum of z and 10 is greater than or equal to 37

$z + 10 \geq 37$

Evaluate each expression. (2 points each) → CLEARLY SHOW WORK GOING DOWN,

7) $10 \div (1 - 3)$

$10 \div (-2) =$

-5

8) $((-5) \div (-5)) \cdot 6$

$1 \cdot 6 =$

6

9) $(-1) + 1 + 8 \div (-4)$

$-1 + 1 + (-2) =$

-2

10) $(8 - (-1) + 3) \div 6$

$12 \div 6 =$

2

11) $5 + 5 \cdot 4 + 4(2 - 2)$

$5 + 20 + 4(0) =$

25

12) $4 + 3 \cdot 2 + 6 - 2^3$

$4 + 6 + 6 - 8 =$

$16 - 8 =$

8

Evaluate each using the values given. Show the substitution for 2 pts! (4 points each)

13) $j - (5 - k)$; use $j = 6$, and $k = 5$

$6 - (5 - (5)) =$

$6 - 6 =$

$\boxed{6}$

14) $npm - m$; use $m = 6$, $n = 2$, and $p = 2$

$(2)(2)(6) - 6$

$24 - 6$

$\boxed{18}$

Evaluate each expression. (2 points each)

* 15) $6 - (-8) - 6 - 2$

$-8 + 14 =$

$\boxed{6}$

16) $2 \cdot -10 \cdot 5$

$\boxed{-100}$

17) $2 \cdot 10 \cdot -2 \cdot -10$

$20 \cdot -2 \cdot -10 =$

$-40 \cdot -10 =$

$\boxed{400}$

* 18) $\frac{-50}{-10} = \boxed{5}$

19) ~~$72 \div 8$~~ $\left(\frac{-2}{3}\right)^3 =$

$\frac{-2}{3} \cdot \frac{-2}{3} \cdot \frac{-2}{3} = \boxed{\frac{-8}{27}}$

* 20) $-12 \div 4 \cdot -2$

$-3 \cdot -2 = \boxed{6}$

21) $-\sqrt{64}$

$\boxed{-8}$

22) $10 - \sqrt{36}$

$10 - 6 =$

$\boxed{4}$

23) $-\left(3 - \frac{16}{-4}\right)$ Take opposite!

$-[3 - (-4)]$

$-[7]$

$\boxed{-7}$

24) $-|-6 + 3|$ ABS VALUE!

Take opposite

$-|-3| =$

$-(3) =$

$\boxed{-3}$

Simplify each expression. Write in standard form with the variable term first and the constant last. (4 points each)

25) $-10 + 3x + 12 - 8x$

$-5x + 2$

26) $-3(10x - 2) + 4$

DISTRIBUTE

$-30x + 6 + 4$

$-30x + 10$

27) $6 - 5(4x + 1)$

DISTRIBUTE

$6 - 20x - 5$

$-20x + 1$

28) $3(-10n - 8) - 5(1 - 9n)$

DISTR. DISTR.

$-30n - 24 - 5 + 45n =$

$15n - 29$

For each equation or inequality determine if -9 is a solution or not a solution - 2PTS. Show your ~~work BY SHOWING~~ the substitution step - 2PTS. (4 points each)

29) $\frac{x}{9} + 5 \leq 4$

$\frac{(-9)}{9} + 5 \leq 4$

$-1 + 5 \leq 4$

$4 \leq 4$ (T)

SOLUTION

*30) $\frac{x}{9} - 2 > 3$

$\frac{(-9)}{9} - 2 > 3$

$-1 - 2 > 3$

$-3 > 3$ (F)

NOT A SOLUTION

31) $\frac{x}{9} - 4 = 5$

$\frac{-9}{9} - 4 = 5$

$-1 - 4 = 5$

$-5 \neq 5$ (F)

NOT A SOLUTION

*32) $\frac{x}{3} + 5 = 2$

$\frac{-9}{3} + 5 = 2$

$-3 + 5 = 2$

$2 = 2$ (T)

SOLUTION

Solve each equation. And Check. (4 points each) substitute into orig EQ !

33) $-6 - 4x = -5x - 4$

$+5x \quad +5x$

$x - 6 = -4$

$+6 \quad +6$

$x = 2$

C: $-6-4(2) = -5(2)-4$

$-14 = -14$ ✓

34) $-x - 6x + 8 = 1 - 6x - 2x$

$-7x + 8 = -8x + 1$

$+8x \quad +8x$

$x + 8 = 1$

$-8 \quad -8$

$x = -7$

C: $-(-7)-6(-7)+8 = 1-6(-7)-2(-7)$

$7+42+8 = 1+42+14$

$57 = 57$ ✓

35) $-1(1 - 6n) = 1 + 2(n + 3)$

$-1+6N = 1+2N+6$

$6N-1 = 2N+7$

$-2N \quad -2N$

$4N-1 = 7$

$+1 \quad +1$

$\frac{4N}{4} = \frac{8}{4}$

$N = 2$

C: $-(1-6\cdot2) = 1+2(2+3)$

$-(-11) = 1+2(5)$

$11 = 11$ ✓

36) $-14 + 6x - 4x = -5x - 6 + 6x$

$2x - 14 = x - 6$

$-x \quad -x$

$x - 14 = -6$

$+14 \quad +14$

$x = 8$

C: $-14+6(8)-4(8) = -5(8)-6+6(8)$

$-14+48-32 = -40-6+48$

$2 = 2$ ✓

37) $9(12 - 11n) = 12(9 - n)$

$72 - 99N = 72 - 12N$

$+99N \quad +99N$

$72 = 72 + 87N$

$-72 \quad -72$

$\frac{0}{87} = \frac{87N}{87}$ ← NOTICE VARIABLE did NOT DROPOUT.

$N = 0$

C: $9(12-11\cdot0) = 12(9-0)$

$9(12) = 12(9)$

$72 = 72$ ✓

38) $7 - 2n - 3 = -2(3n + 2) - 5(n - 7)$

$-2N+4 = -6N-4 \quad -5N+35$

$-2N+4 = -11N+31$

$+11N \quad +11N$

$9N+4 = 31$

$-4 \quad -4$

$\frac{9N}{9} = \frac{27}{9}$

$N = 3$

C: $7-2(3)-3 = -2(3\cdot3+2)-5(3-7)$

$7-6-3 = -2(11)-5(-4)$

$-2 = -22+20$

$-2 = -2$ ✓

39) $2(n + 5) = -(-2n + 4)$

$2N+10 = 2N-4$

$-2N \quad -2N$

$10 = -4$ (F)

← Notice variable drops out →

N = NO SOLUTION

40) $-3(1 + 7x) = 3(-7x - 1)$

$-3-21x = -21x-3$

$+21x \quad +21x$

$-3 = -3$ (T)

X = ALL REAL NUMBERS