

Algebra 1 – Ch. 1 Test Review

Name: _____ Hour: _____

1.1 Problems.

Evaluate the following expressions for the given x value.

1. $-4x + 15$; $x = -9$

2. $\left| \frac{1}{3}x - 21 \right|$; $x = 12$

3. $-3 + \sqrt{x + 11}$; $x = 14$

Evaluate the following expressions for the given x and y values. $x = \frac{3}{4}$; $y = -2$

4. $4x + 8y$

5. $\sqrt{-2y} - \frac{2}{3}x$

6. $2x + |3y|$

1.3 Problems. (we skipped 1.2)

Solve the following equations.

7. $-14 = p - 11$

8. $-5x = 18$

9. $-16 = r - 9$

10. $\frac{y}{4} = -3$

11. $0 = 12x$

12. $m + 13 = 32$

13. $-4 + h = 17$

14. $-5 = -\frac{w}{7}$

1.4 Problems.

Solve the following equations.

15. $10 = 7 - m$

16. $5 = \frac{z}{-4} - 3$

17. $\frac{a}{3} + 4 = 6$

18. $36 = 13n - 4n$

19. $6c - 8 - 2c = -16$

20. $12v + 10v + 14 = 80$

21. $4(z + 5) = 32$

22. $2(x + 3) + x = -9$

Write an equation for the given sentence and solve it.

Tips: Sum means add. Difference is subtraction. "IS" basically translates to = . "Times" is multiplication usually. And "quotient" is division. When it mentions "a number" use a variable, like x. Parenthesis may be needed if it mentions doing something in order. Like "Six times the sum of a number and 15 is -42" would be $6(x + 15) = -42$

23. The sum of twice a number and 13 is 75.

24. The sum of twice a number and 10 is 42.

25. Four times the difference of a number and 7 is 12.

26. Eight plus the quotient of a number and 3 is -2.

1.5 Problems.

Solve the following equations.

27. $5t + 16 = 6 - 5t$

28. $-3r + 10 = 15r - 8$

29. $2(4x + 2) = 4x - 12(x - 1)$

30. $12y + 6 = 6(2y + 1)$

31. $3(4g + 6) = 2(6g + 9)$

32. $w - 2 + 2w = 6 + 5w$

1.6 Problems.

Solve the following absolute value equations.

33. $16 = 2|x| + 8$

34. $5|x - 7| = 40$

35. $\left|\frac{y}{5}\right| - 11 = -7$

36. $-2|-3 + 4x| + 10 = 0$

37. $|x - 19| = -5$

38. $-8 = |x + 5| - 8$

39. $-2|5w - 7| + 9 = -7$

1.7 Problems.

Solve the following equations for the given variable.

Tip. Simplify each side first. Then, if you're solving for x, decide what side you want x to be on. Move it to that side, and move everything else to the other. Then divide by whatever is multiplying with your letter (last).

40. Solve for y. $y - 3x = 13$

41. Solve for y. $-x + 5y - 11 + 3x = 12$

42. Solve for b. $2(b + a) - 7b = 15 +$

43. Solve for c. $-12 + 3a - 5c = -3(4 - c)$