

Honors Algebra 1 Unit 3 Test Review (Lessons 1-14)

Solve the following equations for x . State any excluded values where necessary.

1. $2x - 5 = -43$

2. $-5(x + 2) = 3 - x$

3. $\frac{x}{5} = \frac{x+6}{10}$

4. $-93 = 2(6x + 1) + 1$

5. $\frac{x-1}{x+5} = \frac{2}{7}$

6. $\frac{-x+4}{x-4} = 3$

7. $\frac{x}{5} - \frac{2x}{3} = 4$

8. $5[2 - 3(4 + 2x)] = -2(x - 3)$

9. $\frac{x}{2} + \frac{3}{8} = \frac{3x}{4} - 1$

10. $\frac{1}{3}(6x + 15) - 2 = 2(x + 1) + 1$

Solve using the zero product property.

11. $(4x + 8)(x - 7) = 0$

12. $2x(3x - 1) = 0$

Solve the following absolute value equations.

13. $|-8 + n| = 16$

14. $2|x + 7| - 3 = -9$

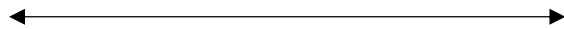
15. $9\left|\frac{p}{6}\right| + 2 = 5$

16. $4|3 - 2y| = 52$

Solve and write your answer in interval notation. Then graph your solution.

17. $x + 7 < -3$

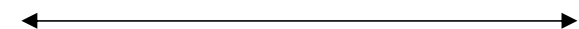
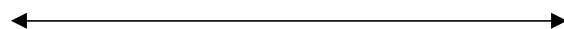
18. $-3(x + 4) \leq 6$



19. $17 > 2x + 1$



20. $4 - x \geq 5x - 2$



Solve each equation for y .

21. $4x - 6y = 18$

22. $\frac{2y}{w} + 3 = f$

23. Write the reason that supports each step of the following proof.

$\frac{2(3(x + 6) - 18)}{6} = 7$	Original Statement
$2(3(x + 6) - 18) = 42$	
$2(3x + 18 - 18) = 42$	
$2(3x) = 42$	
$6x = 42$	
$x = 7$	

Answer Key

1. $x = -19$	2. $x = -\frac{13}{4}$	3. $x = 6$	4. $x = -8$
5. $x = \frac{17}{5}$	6. No solution	7. $x = -\frac{60}{7}$	8. $x = -2$
9. $x = \frac{11}{2}$	10. Infinitely many solutions	11. $x = -2$ or $x = 7$	12. $x = 0$ or $x = \frac{1}{3}$
13. $n = 24$ or $n = -8$	14. No solution	15. $p = 2$ or $p = -2$	16. $y = -5$ or $y = 8$
17. $x < -10$ $(-\infty, -10)$	18. $x \geq -6$ $[-6, \infty)$	19. $x < 8$ $(-\infty, 8)$	20. $x \leq 1$ $(-\infty, 1]$
21. $y = \frac{2}{3}x - 3$	22. $y = \frac{wf - 3w}{2}$		

23.

$\frac{2(3(x+6) - 18)}{6} = 7$	Original Statement
$2(3(x+6) - 18) = 42$	Multiplication Property of Equality
$2(3x + 18 - 18) = 42$	Distributive Property
$2(3x) = 42$	Combining like terms
$6x = 42$	Multiplication (2x3)
$x = 7$	Division Property of Equality