

Algebra 2/Trig Honors
Solving Equations

Name_____

Show all of your work as you solve each.

1. $-4(5x + 7) + 6(2x + 6) = -\frac{3}{4}(8x - 16) - 9$

2. $-2[4(2 - 3x) - 6(x - 1)] = \frac{5}{2}(4x - 8) + 3(1 - 4x)$

3. $\frac{2}{3}|2x - 5| - 6 = 2$

4. $9 - 3|x + 4| \leq 3$

$$5. \frac{1}{x-2} + 2 = \frac{3x}{x+2}$$

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

$$7. \frac{3x}{x^2+2x-8} = \frac{1}{x-2} + \frac{x}{x+4}$$

$$8. \sqrt[3]{4x+2} - 6 = -10$$

$$9. x + 5 = \sqrt{21x + 1}$$

$$10. \sqrt{x+2} = 2 - \sqrt{x}$$