

Name: _____ Key: _____ Date: _____ Per: _____

2.3A Solving Multi-Step Equations (3-Step)

Solve the equation.

$$\begin{aligned} \text{Ex.) } \underline{\underline{3(x-1)}} - \underline{\underline{2x+5}} &= -3 \\ 2x \cancel{-2} &= -3 \\ \underline{\underline{2x}} - \underline{\underline{4}} & \\ \underline{\underline{2}} & \quad \underline{\underline{2}} \\ x &= 2 \end{aligned}$$

Steps

- 1) Eliminate all parentheses by distributing. (If possible)
- 2) Combine all like terms. (If possible)
- 3) Add or subtract to isolate the variable term.
- 4) Multiply or divide to isolate term completely.
• Whatever you do to one side you must do to the other.

Solve the equation. (Must show all steps)

1. $7x - 3 = 23$

2. $-2x + 7 = 15$

3. $8 = 3x - 1$

4. $4x - 11 = -3$

5. $8 + 5x = -7$

6. $-2x - 5 = -13$

7. $\frac{3}{2} + 9 = 9$

8. $\frac{5}{3} - 9 = 2$

9. $6 + \frac{2}{4} = -1$

10. $\frac{1}{2}x + 6 = 6$

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

12. $1 = \frac{3}{2}x + 7$

13. $5(x+4) = 45$

14. $3(x-2) = 15$

15. $16 = 4(x-5)$