

3.4 Quiz Study Guide

3.4: Solve equations with variables on both sides

***Hint: Do all the math you can *before* you start moving things to the other side. (Combine like terms, distribute) When it is time to move things to the other side, do variables before numbers!**

Ex: $5x - 10 = 2x + 20$

Ex: $-3x + 6 = -8x + 11$

Ex: $3m - 25 - 8m = m - 14$

Ex: $4(m - 3) = 2(6 - 2m)$

- Be able to identify when an equation has no solution, infinite solutions or 0 as the solution

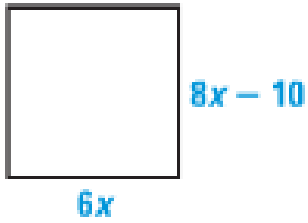
Ex: $-5(3a - 4) = 7a + 27 - 7$

Ex: $4(3x + 2) = 2(6x + 4)$

Ex: $5z - 6 = (z - 1)5$

Find the perimeter of the square.

Ex:



Ex: Amy wants to join a movie theater club where she would pay \$150 up front and then get to see as many movies as she wants in theaters for \$5 each. A non-member must pay \$12.50 for each movie. Amy wants to set up an equation to figure out when the cost of a member and a non-member would be equal.

a) Set up and solve an equation to represent the situation. Be sure to identify a variable and what it represents.

b) Solve your equation.

c) Explain the meaning of the solution as well as when Amy should choose to become a member and when she should choose to remain a non-member.