LESSON 6.2

Name _____ Date _____

Challenge Practice

For use with pages 278–281

The equations you have solved so far have had one solution. Sometimes an equation can have no solutions or infinitely many solutions.

Example: Solve $-3x + 5 + 5x = 4x - 2x + 5$

Solution:

$$2x + 5 = 2x + 5$$

$$2x + 5 - 2x = 2x + 5 - 2x$$

$$5 = 5$$

Since the equation $5 = 5$ is equivalent to the original equation, and it is true no matter what x is, there are infinitely many solutions.

In Exercises 1–8, solve the equation. Write whether there is one solution, no solutions, or infinitely many solutions.

1. $5x + 3 + 2x - 6x = 4 + 12$
2. $2t + 6 = 2(t + 4)$
3. $4(w - 3) - w = w - 6$
4. $5y - 15 = 5(y - 3)$
5. $6(4k - 1) = 12(2k + 3)$
6. $2(a - 4) + 5a = -22$
7. $3(6 - 4p) = 2(-6p + 4)$
8. $3(b - 4) + 3 = -2b + 5b - 9$
9. Write an equation that has no solutions.
10. Write an equation that has infinitely many solutions.