Name _____ Date _____ Class _____

LESSON 7-4

Equations with Many Solutions or No Solution

Practice and Problem Solving: A/B

Tell whether each equation has one, zero, or infinitely many solutions. If the equation has one solution, solve the equation.

1. $4(x-2) = 4x + 10$

2. $\frac{1}{2}n + 7 = \frac{n + 14}{2}$

3. $6(x - 1) = 6x - 1$

4. $6n + 7 - 2n - 14 = 5n + 1$

5. $4x + 5 = 9 + 4x$

6. $\frac{1}{2}(8 - x) = \frac{8 - x}{2}$

7. $8(y + 4) = 7y + 38$

8. $4(-8x + 12) = -26 - 32x$

9. $2(x + 12) = 3x + 24 - x$

10. $3x - 14 + 2(x - 9) = 2x - 2$

Solve.

11. Cell phone company A charges $20 per month plus $0.05 per text message. Cell phone company B charges $10 per month plus $0.07 per text message. Is there any number of text messages that will result in the exact same charge from both companies?

12. Lisa's pet shop has 2 fish tanks. Tank A contains smaller fish who are fed 1 gram of food each per day. Tank B contains larger fish who are fed 2 grams of food each per day. If Tank B contains $\frac{2}{3}$ the number of fish that Tank A contains, will Lisa ever feed both tanks the same amount of food?