Name _____ Date _____ Class _____

LESSON 12-3

Practice A

Solving Equations with Variables on Both Sides

Group the terms with the variables on one side of the equal sign and simplify. Do not solve.

1. $9p = 6p + 21$

2. $-5t - 14 = 2t$

3. $2k = 18 - 4k$

4. $-6u + 48 = 6u$

5. $7m - 25 = 2m$

6. $\frac{5}{9}a = 6 + \frac{4}{9}a$

Solve. Match each equation with its solution. Must show work

7. $8n = 6n - 14$

8. $7n + 8 = 11n$

9. $2n + 8 = 3n$

10. $\frac{3}{4}n + 2 = \frac{1}{4}n + 1$

11. $9 + 3n = 4n$

12. $\frac{5}{8}n + 5 = \frac{7}{8}n + 7$

A. n = 8

B. n = 9

C. n = −7

D. n = 2

E. n = −8

F. n = −2

13. Members of the Campus Roller Rink pay a yearly membership fee of $50 plus $5 each time they go skating. Nonmembers pay $10 each time they go skating. How many times would both a member and a nonmember have to go skating in a year in order to pay the same amount? _____

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Name _____ Date _____ Class _____

LESSON 12-3

Practice B

Solving Equations with Variables on Both Sides

Group the terms with the variables on one side of the equal sign and simplify.

1. $10t = 6t + 24$

2. $-6x - 32 = 2x$

3. $j = 20 - 4j$

4. $-5d + 40 = 5d$

5. $9m - 28 = 2m$

6. $\frac{8}{9}x = 8 + \frac{4}{9}x$

Solve.

7. $8k = 6k - 26$

8. $32 - 5v = 3v + 8$

9. $-12y - 10 = -6y + 14$

10. $\frac{5}{8}a + 6 = \frac{3}{4}a$

11. $\frac{1}{4}n + 10 = \frac{2}{3}n$

12. $20 - \frac{1}{5}d = \frac{3}{10}d + 16$

13. Members of the Lake Shawnee Club pay $40 per summer season plus $7.50 each time they rent a boat. Nonmembers pay $12.50 each time they rent a boat. How many times would both a member and a nonmember have to rent a boat in order to pay the same amount? _____

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