LESSON 3.3

Name _____ Date _____

Practice B

For use with pages 130–136

Tell whether the given value of the variable is a solution of the equation.

1. $41 - 8x = -6x - 23;\ x = -9$

2. $4x + 13 = -9 - 3(x + 9);\ x = -7$

3. $-2(3x + 7) = -3(2x + 8);\ x = -5$

4. $-9x + 7 = 25 + 2(5 - x);\ x = -4$

Solve the equation. Check your solution.

5. $12x - 28 = -63 + 7x$

6. $6x - 21 = 33 + 9x$

7. $-15x = -5(3x + 7)$

8. $16x - 19 = 113 - 6x$

9. $-19x - 34 = 56 - x$

10. $-6(4x + 3) = 6(-4x - 3)$

11. $3(-2x + 5) = 11 - 4x$

12. $14 - 9x = -8(10 + x)$

13. $-3(8x + 11) = 6(-4x - 13)$

14. $5x - 8 = 13 + 7(x - 3)$

15. $15x + 24 = 8(10 + 3x) - 2$

16. $-9x + 15 = -22 - 4(x + 12)$

Write the verbal sentence as an equation. Then solve the equation.

17. Negative thirteen times a number plus 20 is equal to -11 times the number plus 38.

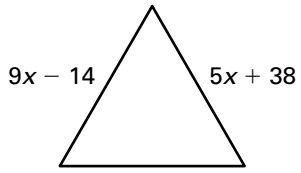
18. Seventeen less than 6 times a number is equal to 47 plus 10 times the number.

19. Twenty nine less than -10 times a number is equal to -18 times the number plus 91.

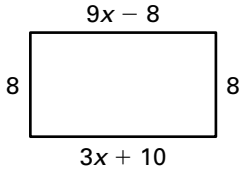
20. Seventeen times a number minus 56 is equal to 10 times the number minus 63.

Find the perimeter of the triangle or rectangle. The sides of the triangle are equal in length.

21.



22.



23. You are buying flowers to hand out at a school dance. Roses cost \$30 for a dozen but cost more if bought individually. With the money you have, you can buy 7 dozen and 4 single roses, or 64 single roses. How much is one rose? How much money do you have?

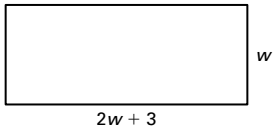
24. The populations of two towns are changing at steady rates. One town has a population of 25,500. Its population is increasing by 2000 people each year. The other town has a population of 47,900. Its population is decreasing by 800 people each year. If the rates for each town remain the same, in how many years will the populations be the same?

Lesson 3.2 *continued*

12. -11 **13.** -5 **14.** -2 **15.** 9 **16.** 7
17. 7 **18.** 5 **19.** 3 **20.** 2 **21.** 6 in. × 9 in.
22. \$8 **23.** \$12

Practice B

1. 5 **2.** -8 **3.** -1 **4.** 9 **5.** -7 **6.** -11
7. -6 **8.** -3 **9.** -5 **10.** 8 **11.** 3
12. -4 **13.** 10 **14.** 4 **15.** 11 **16.** 8
17. a.



b. $2w + 2(2w + 3) = 48$
c. Width = 7 in., length = 17 in.
18. $485 = 230 + 5(44 + g)$; 7 guests
19. $3(30) + 42h + 195 = 390$; 2.5 hours

Practice C

1. -4 **2.** -15 **3.** 3 **4.** -9 **5.** 4 **6.** 1
7. 8 **8.** -5 **9.** 6 **10.** -2 **11.** 12 **12.** 10
13. 6.2 **14.** 6 **15.** 12 **16.** 4.9
17. $p + (p + 1) + (p + 1 + 1) = 45$; Kevin has 14 sponsors, Mika has 15 sponsors, and Cheryl has 16 sponsors. **18.** \$10.75
19. $2x + 2(2x + 2) = 178$; 58 and 60
20. $(2x - 1) + (2x - 1 + 2) = 104$; 51 and 53

Review for Mastery

1. 2 pounds **2.** 5 **3.** 5 **4.** 11 **5.** 3
6. 1 **7.** 12

Challenge Practice

1. 12 **2.** $\frac{3}{4}$ **3.** 1 **4.** No solution **5.** 12 fish
6. 6, 11, and 22 **7.** 5 and 19 **8.** 2 **9.** 3

Lesson 3.3

Practice A

1. Yes **2.** No **3.** No **4.** Yes **5.** 11 **6.** 1
7. -7 **8.** 2 **9.** No solution **10.** 4 **11.** 6
12. 3 **13.** -8 **14.** Every number **15.** 8
16. 5 **17.** $5 - 6x = -11 + 2x$; $x = 2$
18. $-7x - 4 = 13 - 6x$; $x = -17$
19. $8x + 5 = 5x - 13$; $x = -6$
20. $10x - 1 = -2x + 35$; $x = 3$ **21.** 6 **22.** 5
23. $60 + 5w = 45 + 8w$; 5 weeks
24. $4t + 48 = t + 282$; tennis court is 78 feet long, football field is 360 feet long

Practice B

1. No **2.** Yes **3.** No **4.** Yes **5.** -7
6. -18 **7.** No solution **8.** 6 **9.** -5
10. Every number **11.** 2 **12.** 94
13. No solution **14.** 0 **15.** -6 **16.** 17
17. $-13x + 20 = -11x + 38$; $x = -9$
18. $6x - 17 = 47 + 10x$; $x = -16$
19. $-10x - 29 = -18x + 91$; $x = 15$
20. $17x - 56 = 10x - 63$; $x = -1$
21. 309 units **22.** 54 units **23.** \$3.50; \$224
24. 8 years

Practice C

1. 4 **2.** -11 **3.** -17 **4.** 75 **5.** -56
6. 1 **7.** -1 **8.** 24 **9.** 6 **10.** 23.47
11. $6 + 0.25x = 0.8x - 5$; $x = 20$
12. $12 - 1.8x = 22.8 - 2.7x$; $x = 12$
13. $-20 - 4.6x = -2.3x + 16.8$; $x = -16$
14. $7x - 10.75 = 6.8x + 0.95$; $x = 58.5$
15. 192.3 units **16.** 68 units **17.** 12.48 units
18. 29.42 units
19. $1450 - 105.75m = 825 + 144.25m$; 2.5 months **20.** $12 + 2x = 4x$; 6 feet

Review for Mastery

1. 2 **2.** -14 **3.** 3 **4.** 125 minutes
5. Every number **6.** No solution **7.** 152 units

Challenge Practice

1. 3 **2.** -1 **3.** 4 **4.** -6
5. about 1538 copies **6.** 40 smoothies
7. -32 **8.** 3

Focus On Algebra 3.3

Practice

1. $x = \frac{c - b}{a}$; 6 **2.** $x = \frac{b + c}{a}$; 5

3. $x = \frac{c - ab}{a}$; 3 **4.** $x = ab$; 45