LESSON 2.3

Name _____ Date _____

Practice

For use with pages 78–83

1. Describe and correct the error in the solution.

$$\begin{aligned} 16z + 3(24z - 6) - (7 + 31z) &= 16z + 72z - 6 - 7 - 31z \\ &= 16z + 72z - 31z - 6 - 7 \\ &= 57z - 13 \end{aligned}$$

For the given expression, identify the terms, like terms, coefficients, and constant terms. Then simplify the expression.

2. $4d - 5 - 9d + 17$

3. $-8p - 12 + 7p - 11$

4. $27 - 13t + 32 - 2t + 10t$

5. $6f - 14 + 26 - 3f - 15f$

6. $-11j + 16 - 22j - 27 + 5j$

7. $-18 + 3z + 23 - 19z + 7z$

Simplify the expression.

8. $-4(5c + 7) - 3c + 13$

9. $-11(9 - 3y) + 12y - 14$

10. $2(3a - 6) - 15a - 26$

11. $-(19 - 2g^2) - 57 + 4g^2$

12. $24u - 6(8 - 4u) + 52$

13. $16x^2 - 5(7 - x^2) + 43$

14. $-(21k - 3 + 4) - 17k$

15. $8(6h - 11) + 5(20 - 3h)$

16. $10(7 - 4b) - 9(21b - 8)$

17. $-m^2 + 14 - (6m^2 + 13 + m^2)$

18. $-5w^2 + 23 - (29 - 4w^2 + 9)$

19. $28 - 6n + 7(2n - 8) - 3n$

20. $21 - 7(19 - x^2 + 6) - 3x^2 + 1$

21. You are making a rectangular poster to advertise a school fundraiser. You want the poster to be twice as long as it is wide. Let w represent the width (in meters) of the poster.

a. Write and simplify an expression in terms of w for the perimeter of the poster.

b. Write and simplify an expression in terms of w for the area of the poster.

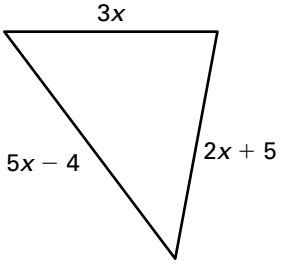
c. Complete the table.

Width (meters)	1	2	3	4
Perimeter (meters)	?	?	?	?
Area (square meters)	?	?	?	?

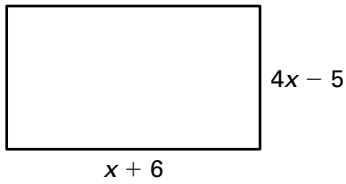
d. Which width given in the table allows for the most area while not exceeding a perimeter of 20 meters?

Write and simplify an expression for the perimeter of the triangle or rectangle.

22.



23.



24.