Name _____ Date _____

7.5 Practice A

In Exercises 1–12, factor the polynomial.

1. $x^2 + 5x + 6$

2. $x^2 + 8x + 12$

3. $z^2 + 11z + 28$

4. $w^2 - 7w + 12$

5. $y^2 - 14y + 24$

6. $x^2 - 11x + 28$

7. $x^2 + x - 20$

8. $y^2 - 6y - 16$

9. $m^2 + 8m - 9$

10. $n^2 - 3n - 40$

11. $d^2 + 5d - 24$

12. $z^2 + 3z - 28$

13. A projector displays a rectangular image on a wall. The height of the wall is x feet. The area (in square feet) of the projection is represented by $x^2 - 12x + 32$. The width of the projection is $(x - 4)$ feet.

a. Write a binomial that represents the height of the projection.

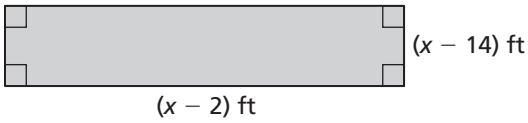
b. Find the perimeter of the projection when the height of the wall is 10 feet.

14. Describe and correct the error in factoring the polynomial.

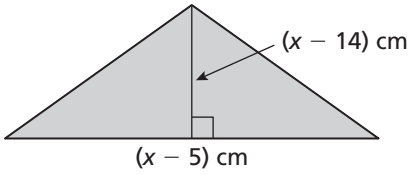
$$\times \quad x^2 - 11x + 18 = (x - 3)(x - 6)$$

In Exercises 15 and 16, find the dimensions of the polygon with the given area.

15. Area $= 45$ ft^2



16. Area $= 35$ cm^2



17. Write an equation of the form $x^2 + bx + c = 0$ that has the solutions $x = -3$ and $x = 8$. Explain how you found your answer.