

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.

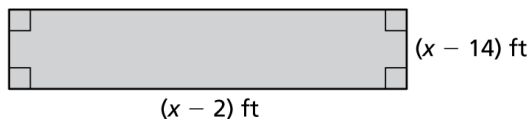
- Write a binomial that represents the height of the projection.
- Find the perimeter of the projection when the height of the wall is 10 feet.

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

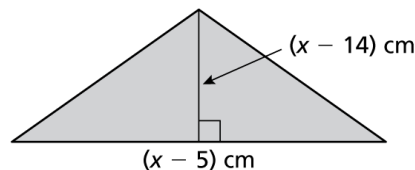
$\times \quad x^2 - 11x + 18 = (x - 3)(x - 6)$

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.

7.5

Practice B

In Exercises 1–12, factor the polynomial.

1. $x^2 + 5x + 4$

2. $w^2 + 9w + 14$

3. $y^2 + 15y + 36$

4. $x^2 - 14x + 45$

5. $j^2 - 16j + 39$

6. $m^2 - 19m + 90$

7. $y^2 + 2y - 35$

8. $w^2 - 8w - 20$

9. $b^2 - b - 30$

10. $p^2 - 6p - 27$

11. $q + q^2 - 56$

12. $-36 + t^2 + 5t$

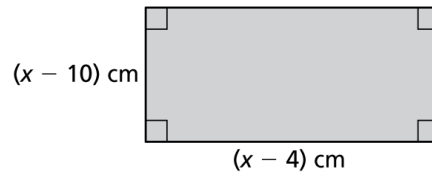
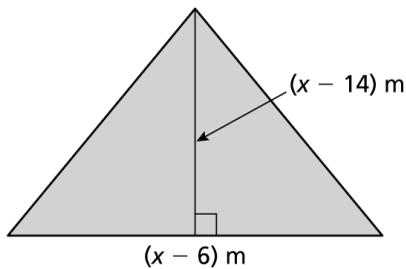
13. Describe and correct the error in factoring the polynomial.

$\times \quad x^2 + 4x - 96 = (x - 12)(x + 8)$

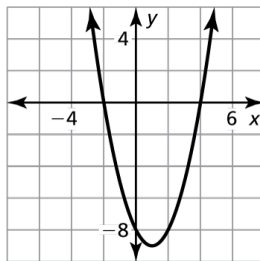
In Exercises 14 and 15, find the dimensions of the polygon with the given area.

14. Area = 120 m^2

15. Area = 55 cm^2



16. The graph shows $y = x^2 - 2x - 8$.



- Explain how you can use the graph to factor the polynomial.
- Factor the polynomial.