

9.4 Practice A

In Exercises 1–3, find the value of c that completes the square.

1. $x^2 - 6x + c$

2. $x^2 - 10x + c$

3. $x^2 + 13x + c$

In Exercises 4–6, complete the square for the expression. Then factor the trinomial.

4. $x^2 - 20x$	5. $x^2 - 4x$	6. $x^2 + 26x$
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In Exercises 7–9, solve the equation by completing the square. Round your answers to the nearest hundredth, if necessary.

7. $x^2 - 12x = -11$	8. $x^2 + 8x = 6$	9. $x^2 + 18x = 7$
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10. A rectangular kitchen has an area of 160 square feet. The length is 12 feet more than the width.

a. Write an equation that represents the area of the kitchen.

b. Find the dimensions of the kitchen by completing the square.

11. You are completing the square to solve $5x^2 + 30x = 45$. What is the first step?

In Exercises 12 – 17, solve the equation by completing the square. Round your answers to the nearest hundredth, if necessary.

12. $x^2 - 6x + 18 = 0$

13. $x^2 + 2x - 15 = 0$

14. $2x^2 - 16x + 20 = 0$

15. $3x^2 + 24x + 21 = 0$

16. $-4x^2 - 16x + 19 = -17$

17. $-2x^2 + 12x + 16 = 22$

18. Find all values of b for which $x^2 + bx + 49$ is a perfect square.