

College Prep Math
Unit 5 Review: Factoring

Name: _____

_____ 1. Which of the following is equivalent to $24x + 6$?

- A. $30x$
 - B. $3(8x + 2)$
 - C. $3(8x + 6)$
 - D. $3(8x + 2x)$
-

_____ 2. Which of the following is NOT equivalent to $24y - 12$?

- A. $2(12y - 12)$
 - B. $2(12y - 6)$
 - C. $4(6y - 3)$
 - D. $12(2y - 1)$
-

_____ 3. Which of the following is NOT equivalent to $84p - 42$?

- A. $2(42p - 42)$
 - B. $6(14p - 7)$
 - C. $42(2p - 1)$
 - D. $2(42p - 21)$
-

_____ 4. Which of the following is NOT equivalent to $40k - 20$?

- A. $20(2k - 1)$
 - B. $5(8k - 4)$
 - C. $2(20k - 20)$
 - D. $2(20k - 10)$
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_____ 5. $x^3 - 7x =$

- A. $(x - 7)(x^2 - x)$
- B. $(x - 7)(x^2 + 1)$
- C. $x(x^2 - 7)$
- D. $x^2(x - 7)$

_____ 6. $a^3 - 5a =$

- A. $a(a^2 - 5)$
 - B. $a^2(a - 5)$
 - C. $(a - 5)(a^2 - a)$
 - D. $(a - 5)(a^2 + 1)$
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_____ 7. $b^3 - 13b =$

- A. $b^2(b - 13)$
 - B. $b(b^2 - 13)$
 - C. $(b - 13)(b^2 - b)$
 - D. $(b - 13)(b^2 + 1)$
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_____ 8. Which of the following is equivalent to $x^2 - 4x - 12$?

- A. $(x + 4)(x - 3)$
 - B. $(x - 4)(x + 3)$
 - C. $(x + 6)(x - 2)$
 - D. $(x - 6)(x + 2)$
-

_____ 9. Which of the following is equivalent to $x^2 - 3x - 10$?

- A. $(x - 5)(x - 2)$
 - B. $(x + 5)(x + 2)$
 - C. $(x - 5)(x + 2)$
 - D. $(x + 5)(x - 2)$
-

_____ 10. Which of the following is equivalent to $x^2 - 3x - 18$?

- A. $(x - 6)(x + 3)$
- B. $(x - 3)(x + 6)$
- C. $(x - 2)(x + 9)$
- D. $(x - 9)(x + 2)$

_____ 11. Which of the following is equivalent to $x^2 - 5x + 6$?

- A. $(x - 2)(x - 3)$
 - B. $(x - 2)(x + 3)$
 - C. $(x + 6)(x + 1)$
 - D. $(x - 6)(x + 1)$
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_____ 12. Which of the following is equivalent to $x^2 - 7x - 8$?

- A. $(x + 1)(x - 8)$
 - B. $(x - 1)(x + 8)$
 - C. $(x - 1)(x - 8)$
 - D. $(x + 1)(x + 8)$
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_____ 13. $x^2 - 5x + 4 =$

- A. $(x + 4)(x + 1)$
 - B. $(x - 4)(x - 1)$
 - C. $(x + 4)(x - 1)$
 - D. $(x - 4)(x + 1)$
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_____ 14. $2x^2 + 5x - 12 =$

- A. $(x - 6)(2x + 2)$
 - B. $(x - 3)(2x + 4)$
 - C. $(x + 2)(2x - 6)$
 - D. $(x + 4)(2x - 3)$
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_____ 15. $x - 1$ is a factor of which of the following?

- I. $x^2 + x - 2$
- II. $2x^2 - 5x + 3$

- A. Neither
- B. I only
- C. II only
- D. I and II

_____ 16. The area of a rectangle is modeled by the function $A = x^2 + 5x + 6$. Which expression represents the dimensions of the rectangle?

- A. $(x + 1)(x + 6)$
 - B. $(x + 2)(x + 3)$
 - C. $(x + 1)(x + 5)$
 - D. $(x + 3)(x + 5)$
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_____ 17. The height of a rocket can be modeled by the function $h = t^2 + 3t - 18$. Which expression shows this height written in factored form?

- A. $(t + 2)(t + 9)$
 - B. $(t - 3)(t + 6)$
 - C. $(t + 9)(t - 2)$
 - D. $(t - 9)(t + 2)$
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_____ 18. A company's profit in dollars can be modeled by the function $P = x^2 + 8x + 12$. Which factored expression represents the profit?

- A. $(x + 2)(x + 6)$
 - B. $(x + 3)(x + 5)$
 - C. $(x + 4)(x + 3)$
 - D. $(x + 2)(x + 8)$
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_____ 19. A car's distance from home is modeled by $d = x^2 - 9$. Which expression represents the factored form of the distance?

- A. $(x - 1)(x + 9)$
 - B. $(x - 9)(x + 1)$
 - C. $(x - 3)(x - 3)$
 - D. $(x + 3)(x - 3)$
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_____ 20. A rectangular garden's area is given by $A = x^2 + 7x + 10$. Which expression shows the area factored?

- A. $(x - 5)(x - 2)$
- B. $(x + 5)(x + 2)$
- C. $(x - 10)(x - 1)$
- D. $(x + 1)(x - 10)$