Unit 3A Practice Test (Factoring)

Multiple Choice
Identify the choice that best completes the statement or answers the question.

1. $2x - 7$ is a factor of which of the following polynomials?
   a. $4x^2 - 2x - 42$
   b. $4x^2 + 26x + 42$
   c. $4x^2 - 26x + 42$
   d. $4x^2 + 2x - 42$

2. Which of the following is a factor of $d^2 - 16d + 63$?
   a. $(d + 9)$
   b. $(d + 7)$
   c. $(d - 7)$
   d. $(d - 2)$

3. Which is a factor of the expression? $3x^2 + 7x - 6$
   a. $(x - 2)$
   b. $(3x + 2)$
   c. $(x - 3)$
   d. $(3x - 2)$

4. Which represents the factored form of the polynomial? $-8x^2 - 10x$
   a. $-2x(4x - 5)$
   b. $-2x(4x + 5)$
   c. $2x(4x + 5)$
   d. $-2(4x + 5)$

5. A rectangular courtyard has an area that is represented by the polynomial $x^2 - 36$. Which binomials could represent the possible dimensions of the courtyard?
   a. $(x - 6)^2$
   b. $(x + 6)(x - 6)$
   c. $-(x + 6)(x - 6)$
   d. $(x + 6)(-x - 6)$

6. Suppose that the area of a square lawn is $9x^2 + 12x + 4$. What is the length of one side of the lawn?
   a. $3x + 2$
   b. $-3x + 2$
   c. $3x - 2$
   d. $2x + 3$

7. Factor the polynomial. $6x^3 + 15x^2 - 8x - 20$
   a. $(3x^2 + 5)(2x - 4)$
   b. $(3x^2 + 4)(2x - 5)$
   c. $(3x^2 - 4)(2x + 5)$
   d. $(3x^2 - 5)(2x + 4)$

8. Factor the polynomial. $9x^2 + 6x - 8$
   a. $(3x + 2)(3x + 4)$
   b. $(3x - 2)(3x - 4)$
   c. $(3x + 2)(3x - 4)$
   d. $(3x - 2)(3x + 4)$
Short Answer

9. What is the GCF of the two monomials $20x^3$ & $18x^3$?

10. Factor. $x^2 + 14x + 48$

11. Factor. $6x^2 + 13x + 6$

12. What is the factored form of the expression $4x^2 - 25$?

13. Factor the expression. $-2x^2 - 8x + 24$

14. Factor the polynomial and write the answer as perfect square factors? $4x^2 - 20x + 25$

15. Factor. $x^2 - 12x + 20$

16. Factor the expression? $3x^2 - 4x - 4$

17. Factor the polynomial. $12x^2 + 18x^3 - 28x - 24$

18. Factor the polynomial. $56w^{11} + 40w^6$

19. Factor completely. $4x^2 + 40x + 96$