Module 3
Solve by Factoring Quiz
Practice Problems

1. Which of the following is a "**Difference of *Perfect Squares***"?

A. $x^2 + 16$ B. $x^2 - 10$ C. $4x^2 + 25$ D. $64x^2 - 121$

2. When "c" is positive in a trinomial of the form: $ax^2 \pm bx + \boldsymbol{c}$, then the factors could have the following signs:

A. $(\ +\ )(\ +\ )$ B. $(\ -\ )(-\ )$ C. $(+\ )(-\ )$ D. $(\ +\ )(\ +\ )$ *or* $(\ -\ )(-\ )$

3. When "c" is negative in a trinomial of the form: $ax^2 \pm bx + \boldsymbol{c}$, then the factors could have the following signs:

A. $(\ +\ )(\ +\ )$ B. $(\ -\ )(-\ )$ C. $(+\ )(-\ )$ D. $(\ +\ )(+\ )$ *or* $(\ -\ )(-\ )$

4. Which is the correct **FIRST** step when factoring?

A. Set up two sets of parentheses B. Cancel out all the x's C. Look for a GCF D. make an x or a diamond

5. What are the correct factors of $\boldsymbol{24x^2 + 2x - 15}$?

A. $(4x + 5)(6x - 3)$ B. $(4x - 5)(6x + 3)$ C. $(4x + 3)(6x - 5)$ D. $(4x - 3)(6x + 5)$

6. What are the correct factors of $\boldsymbol{64x^2 - 9}$?

A. $(32x + 9)(2x - 1)$ B. $(8x + 3)(8x - 3)$ C. $(8x - 3)^2$ D. $(8x + 3)^2$

7. Which of the following is a factor of $\boldsymbol{x^2 - 7x + 18}$?

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

8. Which of the following is a factor of $\boldsymbol{x^2 - 10x - 24}$?

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

9. Which of the following is a factor of $\boldsymbol{15x^2 + x - 2}$?

A. $(5x + 2)$ B. $(3x + 1)$ C. $(x - 2)$ D. $(15x - 2)$

10. Which of the following is a factor of $\boldsymbol{4x^3 - 12x^2 - 40x}$?

A. $(x + 8)$ B. $(x + 10)$ C. $(x + 4)$ D. $(x + 2)$

Factor:

11. $x^2 - 10x - 24$

12. $6x^2 + 5x - 21$

13. $16x^2 + 10x$

14. $x^2 - 49$

15. $3x^3 + 12x^2 - 36x$

16. $12x^2 - 18x$

17. $3x^2 - 300$

18. $20x - 5x^3$

19. $16x^2 - 26x + 3$

20. $7x^2 + 35x - 42$

21. $-2x^3 - 24x^2 - 22x$

22. $4x^3 + 8x^2 + 4x$

Solve by Factoring:

23. $x^2 + 9x + 8 = 0$

24. $6x^2 - x = 1$

25. $10x^2 - 9x - 2 = 0$