

# Factoring and Solving Quadratic Equations Worksheet

Math Tutorial Lab Special Topic\*

## Example Problems

**Factor completely.**

- |                     |                            |
|---------------------|----------------------------|
| 1. $3x + 36$        | 9. $2x^3 - 16x^2 - 18x$    |
| 2. $4x^2 + 16x$     | 10. $4x^2 + 17x - 15$      |
| 3. $x^2 - 14x - 40$ | 11. $-8x^2 - 15x + 2$      |
| 4. $x^2 + 4x - 12$  | 12. $x^3 - 3x^2 + 5x - 15$ |
| 5. $x^2 - 144$      | 13. $5rs + 25r - 3s - 15$  |
| 6. $x^4 - 16$       | 14. $125x^3 - 64$          |
| 7. $81x^2 - 49$     | 15. $2x^3 + 128y^3$        |
| 8. $50x^2 - 72$     |                            |

**Solve the following equations.**

- |                           |                                |
|---------------------------|--------------------------------|
| 16. $(x - 4)^2 - 9 = 0$   | 21. $6x^2 - 48x - 54 = 0$      |
| 17. $(x - 10)^2 - 48 = 0$ | 22. $4x^2 + 2x = 12$           |
| 18. $x^2 + 14x + 45 = 0$  | 23. $9x^2 + 7x - 4 = 0$        |
| 19. $x^2 + 6x - 10 = 30$  | 24. $3x^2 + 9x - 6 = 0$        |
| 20. $4x^2 - 100 = 0$      | 25. $x^3 - 5x^2 - 4x + 20 = 0$ |

---

\*Created by Maria Gommel, July 2014