

Name: _____
Algebra 2

Date: _____
Band: _____

Factoring Study Guide

2.1 Factoring $x^2 + bx + c$

Factor the polynomial.

1. $x^2 + 6x - 27$

2. $p^2 + 2p - 35$

3. $b^2 + 18b + 80$

4. $z^2 - 4z - 21$

5. $x^2 - 11x + 28$

2.2 Factoring $ax^2 + bx + c$

Factor the polynomial.

6. $5x^2 + 36x + 7$

7. $3t^2 + 16t - 12$

8. $-5y^2 - 22y - 8$

9. $-2y^2 + 7y - 6$

10. $3z^2 + 26z - 9$

9. $10a^2 - 13a - 3$

2.3 Factoring Special Products

Factor each polynomial.

10. $x^2 - 16$

11. $25x^2 - 30x + 9$

12. $x^2 - 9$

13. $y^2 - 100$

14. $z^2 - 6z + 9$

15. $m^2 + 16m + 64$

2.4 Factoring Polynomials Completely

Factor each polynomial completely.

16. $x^3 + x^2 - 3x - 12$

17. $2x^4 - 8x^2$

18. $2x^3 + 18x^2 - 72x$

19. $n^3 - 9n$

20. $x^2 - 3x + 4ax - 12a$

21. $2x^4 + 2x^3 - 20x^2$