

Name: _____
Algebra 2

Date: _____

Band: _____
Factoring Completely Homework

1. What does it mean for a polynomial to be factored completely?

2. Explain how to choose which terms to group together when factoring by grouping.

Factor by grouping.

3. $x^3 = x^2 + 2x + 2$

4. $y^3 - 9y^2 + y - 9$

5. $3z^3 + 2z - 12z^2 - 8$

6. $2s^3 - 27 - 18s + 3s^2$

7. $x^2 + xy + 8x + 8y$

8. $q^2 + q + 5pq + 5p$

9. $m^2 - 3m + mn - 3n$

10. $2a^2 + 8ab - 3a - 12b$

Factor completely.

11. $2x^3 - 2x$

12. $36a^4 - 4a^2$

13. $2c^2 - 7c + 19$

14. $m^2 - 5m - 35$

15. $6g^3 - 24g^2 + 24g$

16. $-15d^3 + 21d^2 - 6d$

17. $3r^5 + 3r^4 - 90r^3$

18. $5w^4 - 40w^3 + 80w^2$

19. $-4c^4 + 8c^3 - 28c^2$

20. $8t^2 + 8t - 72$

21. $b^3 - 5b^2 - 4b + 20$

22. $h^3 + 4h^2 - 25h - 100$