

Name: _____

Date: _____

Period: _____

Chapter 1: Polynomials
Topic 4: Factoring All Ways - Worksheet

Complete your work & check on separate paper

For each of the examples below, factor each **completely** using any of the methods from our notes:

****Remember: factor out all GCFs first, then factor by other methods if needed***

1. $x^2 + 31x + 168$

2. $w^2 - 39w + 248$

3. $256a^8 - 1$

4. $q^2 + 26q + 133$

5. $a^2 - 20a - 476$

6. $3p^3 + 18p^2 + 24p$

7. $25 - 100y^4$

8. $81j^4 - 441k^4$

9. $21x^5y^2 - 18x^2y^5 + 12xy$

10. $20a^2 - 10a - 100$

11. $3x^2 + 17x - 6$

12. $100x^2 - 16y^2$

13. $24x^3y - 54xy^3$

14. $7x^2 - 10x + 3$

15. $c^2 - 20c + 100$

16. $12b^2 - 17b - 99$

17. $n^2 + 16n - 57$

18. $4x^2 + 20x + 25$

19. $3ax^3 + 60ax^2 + 288ax$

20. $3k^2 - 60k + 300$

21. $p^2 + 3p - 18$

22. $5w^2 - 25w - 30$

23. $2x^4 - 162$

24. $4a^2 + 6x + 2$

25. $10j^3 + 15j^2 - 15j$

26. $u^2 - 13u - 90$

27. $18g^5 - 42g^4 - 120g^3$