

4B-1 Factoring Polynomials with Quadratic Methods

Worksheet

For each graph function, a) write in factored form (as factored as possible, across the rational numbers)
b) Solve for ALL intercepts c) sketch the function, with x and y-intercepts.

1. $f(x) = 16x^4 - 81$

2. $f(x) = x^4 - 16$

3. $f(x) = x^4 - x^2 - 12$

4. $f(x) = x^4 + 6x^2 + 5$

5. $f(x) = x^4 - 10x^2 + 9$

6. $f(x) = 2x^4 - 10x^2 + 12$

7. $f(x) = x^4 - 10x^2 + 24$

8. $f(x) = -x^5 + 10x^3 - 16x$

9. $f(x) = 2x^4 + 15x^2 + 25$

10. $f(x) = -x^4 - x^2 + 6$

11. $f(x) = 2x^4 - 200x^2$

12. $f(x) = 8x^4 - 18x^2$

13. $f(x) = 27x^4 - 3x^2$

14. $f(x) = 3x^4 - 3$

15. $f(x) = -x^4 - 10x^2 - 21$

16. $f(x) = x^4 + 7x^2 - 18$

17. $f(x) = x^4 - 3x^2 + 2x^2$

18. $f(x) = x^4 + 5x^2 - 6$

19. $f(x) = x^4 + 2x^3 - 10x^2$

20. $f(x) = x^2 + 4x + 4$

21. $f(x) = x^5 + 5x^3 - 6x$