

Name: _____

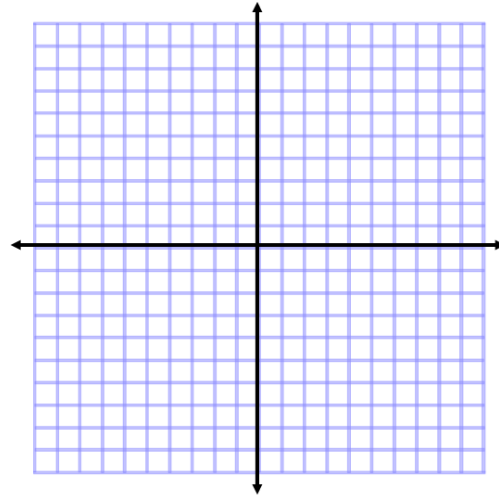
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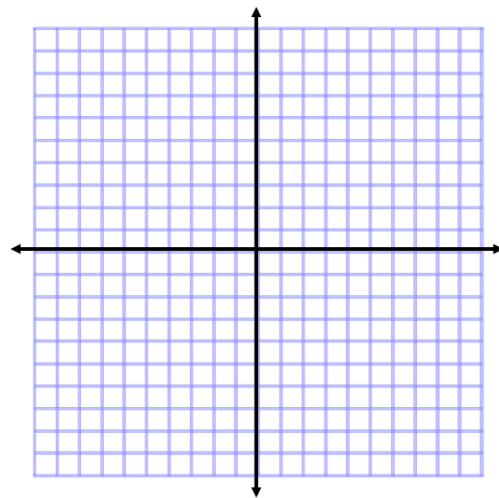
Unit 6: Test Review – Partner Portion

Graphing: Graph the following equations/inequalities

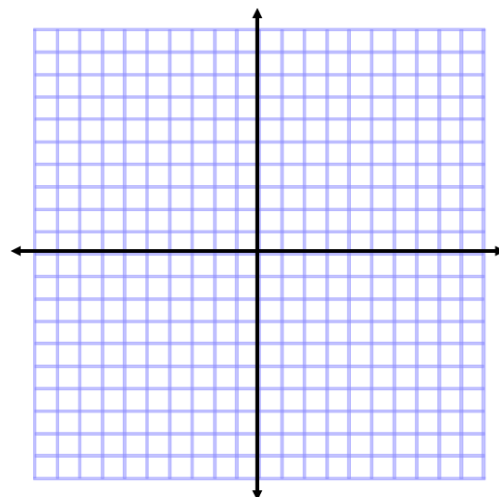
1. $f(x) = (x - 3)(x - 1)(x + 1)$



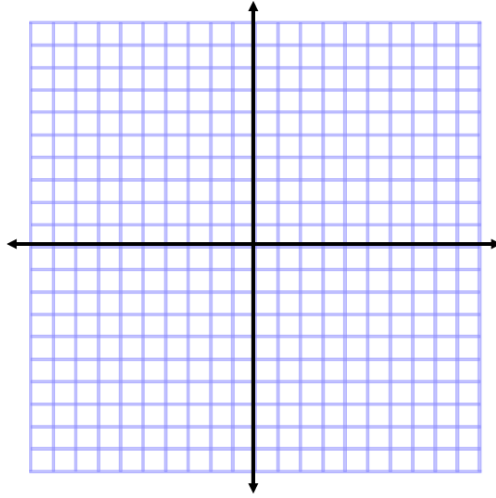
2. $f(x) = -x(x - 4)(x - 1)(x + 1)$



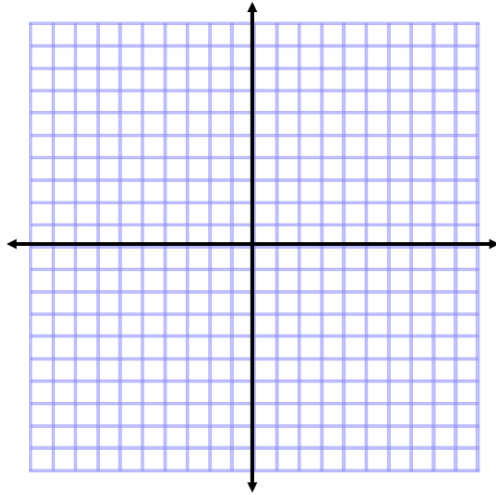
3. $f(x) = x^5 - 2x^3 + x$



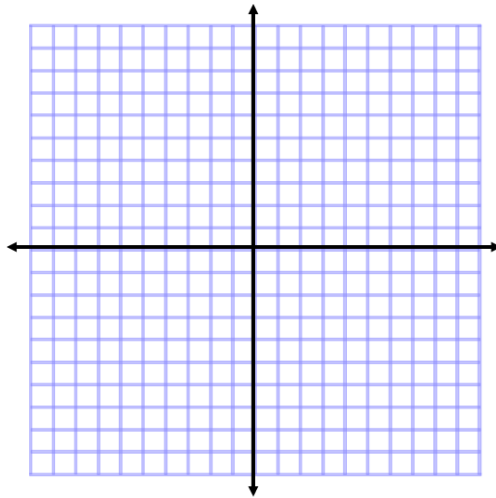
4. $y = |-x^2 - 4x|$



5. $y \leq -(x^2 - 4)(x^2 - 16)$



6. $y > x(x^2 + x - 2)(x^2 + x - 6)$



Unit 6: Test Review – Individual Portion

Simplify: Simplify the following

7. $(2x^3 - 4x^2y + 3xy^2 - y^3) + (x^2 - 3x^2y + y^3)$

8. $(4x^2 + 2x - 5xy) - (2x^2 + 2x - 5y)$

9. $(x^2 + 3xy - y^2)(2x^2 - 4y^2)$

10. $\frac{(x^2 - 2x + 1)(x^2 + 3x + 2)}{(x^2 + x - 2)(x^2 - 1)}$

Solving: Solve the following

11. $-x + 4 \geq 20$

12. $-2x + 3 < 5 - 3x$

13. $8 = |x + 4|$

14. $-3x + 4 = |-x - 8|$

Directions: Identify the degree of the function and the leading coefficient

15. $y = -4x + 3x^2 - 4$

16. $y = 3x^2 + 4x^2 - 3x - x^5 - 6$

17. $y = (x - 1)(x - 2)(x + 2)(x + 1)$

18. $y = x(x - 2)(x - 1)(x + 1)(x + 2)$