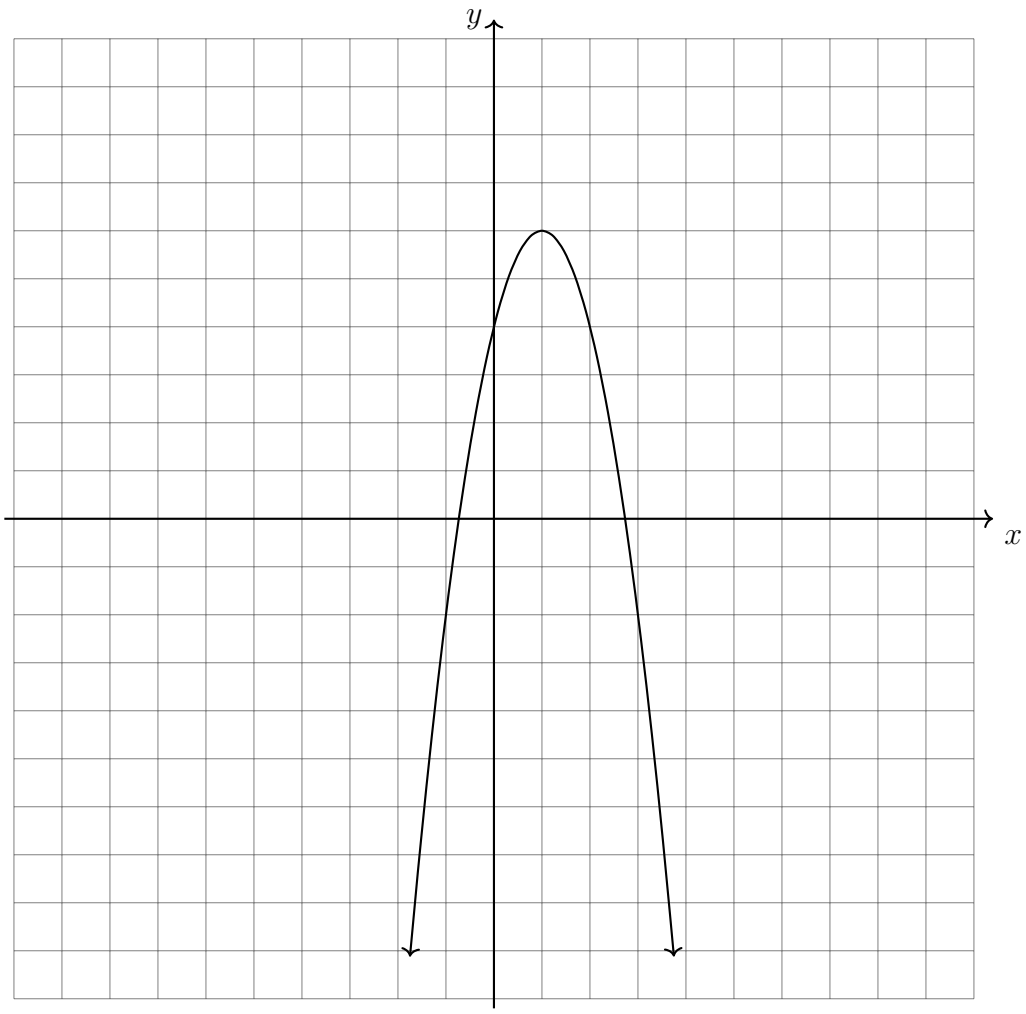
BECA / Dr. Huson / Regents Prep: Graphs First and last name:
14 November 2024 Section:

3.2 Do Now: Graphing quadratic systems

1. The quadratic of a system of equations is graphed. Add a graph of the linear equation. Mark the intersections as ordered pairs.

   $y = a(x^2 - 2x - 2)$ $2x - y = 0$

   Find the value of the a coefficient for the second order polynomial.



2. Circle the equations that are an identities.

   (a) $x^2 - y^2 = (x - y)^2$

   (b) $x^2 + y^2 = x^2 - 2xy + y^2$

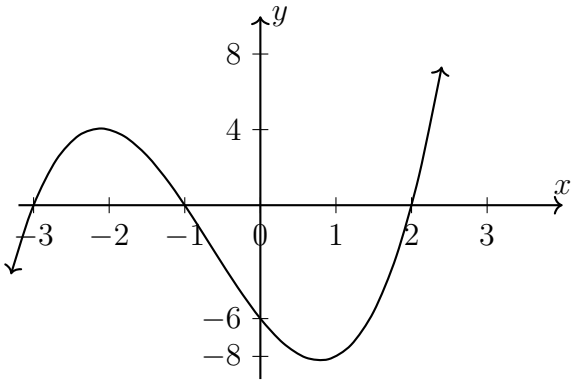
   (c) $x^3 - y^3 = (x - y)(x^2 + xy + y^2)$

   (d) $x^3 + y^3 = (x + y)(x^2 + xy + y^2)$

3. Write a recursive definition of the sequence $a_1 = -2$, $a_2 = 4$, $a_3 = -8$, $a_4 = 16, \ldots$

4. Write down the solutions to the equation $x(2x + 3)(x + 2)(x - 7) = 0$

5. Graphed is $f(x) = x^3 + 2x^2 - 5x - 6$. Write the function in factored form.



6. Solve algebraically for x: $\dfrac{1}{x^2} + \dfrac{1}{2x} = \dfrac{6}{3x}$