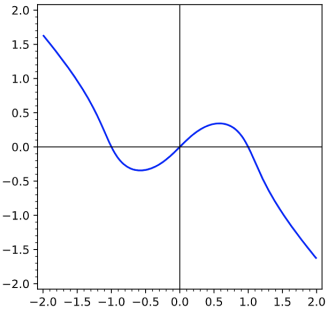
Quiz #7, 10/17
Math 156 (Calculus I), Fall 2023

Problem 1 is worth 5 points and Problem 2 is worth 5 points, for a total of 10 points. Remember to *show your work* on all problems!

1. Consider the curve in the plane defined by $x^3 + y^3 = x - y$. The curve is graphed below:



   Find the slope of the tangent line to this curve at the point $(x, y) = (1, 0)$.

2. The area of a circular bacterial colony is growing at a rate of 10 square centimeters per hour. At what rate is the radius growing when the radius is 2 centimeters?
   Hint: Recall that the area A and radius r of a circle are related by the formula $A = \pi r^2$.