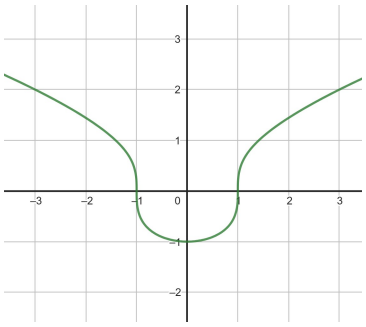
is true, it is a solution which supports the correctness of our graph. The point $(2, 3)$ is not on our graph and so should not be a solution to our equation. Substituting into our equation gives $3 - 2(2) = 4$, which is false, since the left hand side is -1, which is different from 4 so we confirm that $(2, 3)$ is not a solution, which again supports the accuracy of the graph.

15.3 Problems (6 pt Problems)

1. Find a solution to the equation $3y - 2x = -6$ with integer values.
2. Find an equation whose solution is represented by a line which passes through $(-2, 1)$ and $(2, 3)$.
3. Graph $y = -\frac{2}{3}x - 2$.

15.4 Exercises

1. Is $(2, -1)$ a solution to the equation $x^3 - y^3 + y = 3$? Is the point $(2, -1)$ on the graph of $x^3 - y^3 + y = 3$?
2. Identify the slope and y-intercept of $y = -\frac{1}{2}x - 1$, and graph the line.
3. Write the equation of the line passing through $(3, 1)$ and $(15, -10)$.
4. Find two solution of the equation $y = 2$ as an equation with two variables, and use them to represent all solutions on a coordinate plane.
5. Write an equation for a line perpendicular to $y = 2x - 1$ which passes through $(-2, 1)$.
6. Are the following lines parallel: $2x - 4y = 7$ and $3x - 5y = 8$? Explain.
7. Is $(2, 1)$ a solution to the equation whose graph is given below?



8. Find an equation representing the relationship between Celsius and Fahrenheit temperature scales noting the freezing point of water is 0°C and 32°F and boiling point of water is 100°C and 212°F. If it is 76°F outside, what is the temperature in Celsius (use your equation)?

9. A ladder is leaning against a wall so that it meets the wall 7 feet off the ground and the base of the ladder is 2 feet from the wall. If you orient yourself so that the slope of the ladder is positive, a safe slope is 3.87. Is your ladder safe to climb? Explain.