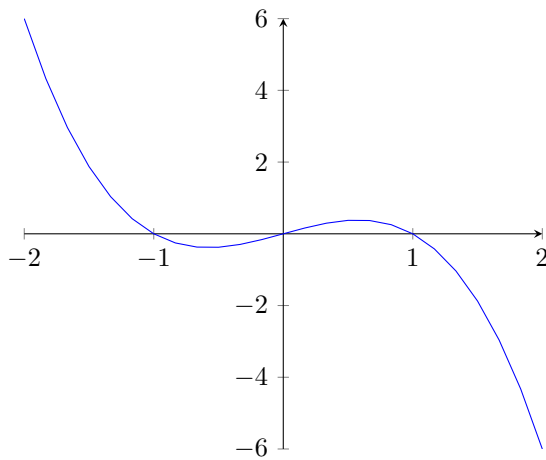


Name: _____

Quiz 1: August 28

1. The following is the graph of $y = -x \cdot (x - 1) \cdot (x + 1)$.



- (a) What are the x -intercepts of this graph?
- (b) What are the y -intercepts of this graph?
- (c) Express, using interval notation, all points where $-x \cdot (x - 1) \cdot x + 1$ is a *positive* number.
2. The temperature, measured in Fahrenheit, is linearly related to the temperature, measured in Celsius.
- (a) Use the fact that $0^\circ C = 32^\circ F$ and $100^\circ C = 212^\circ F$ to express degrees Fahrenheit in terms of degrees Celsius. (Hint: what is the input variable? what is the output?)
- (b) Use the information from (a) to express to express degrees Celsius in terms of degrees Fahrenheit.
- (c) Is the temperature, measured in Fahrenheit, ever equal to the temperature, measured in Celsius? If yes, give the value. If no, explain why not.
3. Can the graph of a function ever have more than one x -intercept? More than one y -intercept? Explain.