

**Problem 1.** Find the domains of each of these two functions:

a)  $f_1(x) = \frac{x^3 + x}{x^2 - 4}$

b)  $f_2(x) = \frac{x}{x^4 + 1}$

Are these functions odd?

**Problem 2.** Find a linear function  $f$  which satisfies the following conditions:

$$f(0) = 1, \text{ and } f(1) = -2.$$

Does the point  $(1, 1)$  lie on the graph of the function  $f$ ?