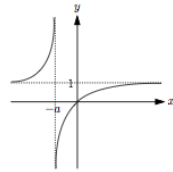


1. [6 points] Circle a possible equation for the following graphs. Here, a is a positive constant.

a. [2 points]



Solution:

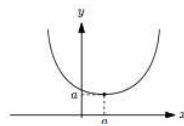
$$f(x) = \frac{x+1}{x+a}$$

$$f(x) = \frac{x}{x-a}$$

$$f(x) = \frac{x}{x+a}$$

$$f(x) = \frac{x+1}{x-a}$$

b. [2 points]



Solution:

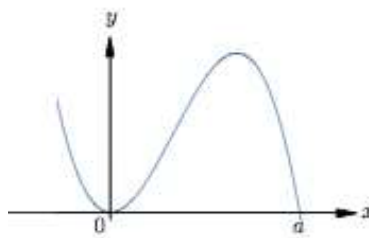
$$f(x) = (x-a)^4 + a$$

$$f(x) = x^2 + a$$

$$f(x) = (x-a)^3 + a$$

$$f(x) = (x+a)^2 + a$$

c. [2 points]



Solution:

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

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

$$f(x) = -(x-a)x$$

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