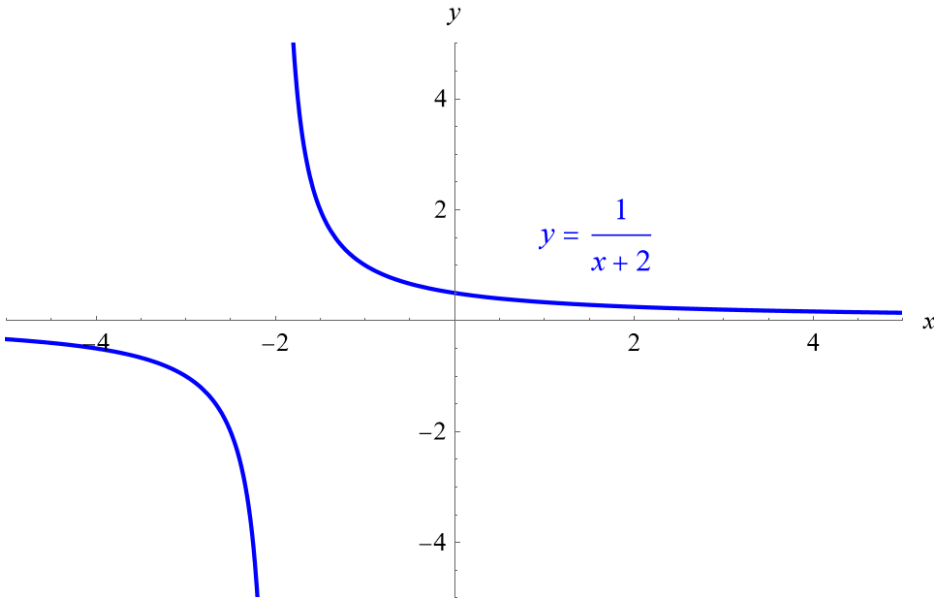
Exercise 17

Explain why the function is discontinuous at the given number a. Sketch the graph of the function.

$$f(x) = \frac{1}{x+2} \qquad a = -2$$

Solution

A graph of the function versus x is shown below.



The function is discontinuous at $x = -2$ because the left-hand and right-hand limits do not exist there, and the function is not defined there.