

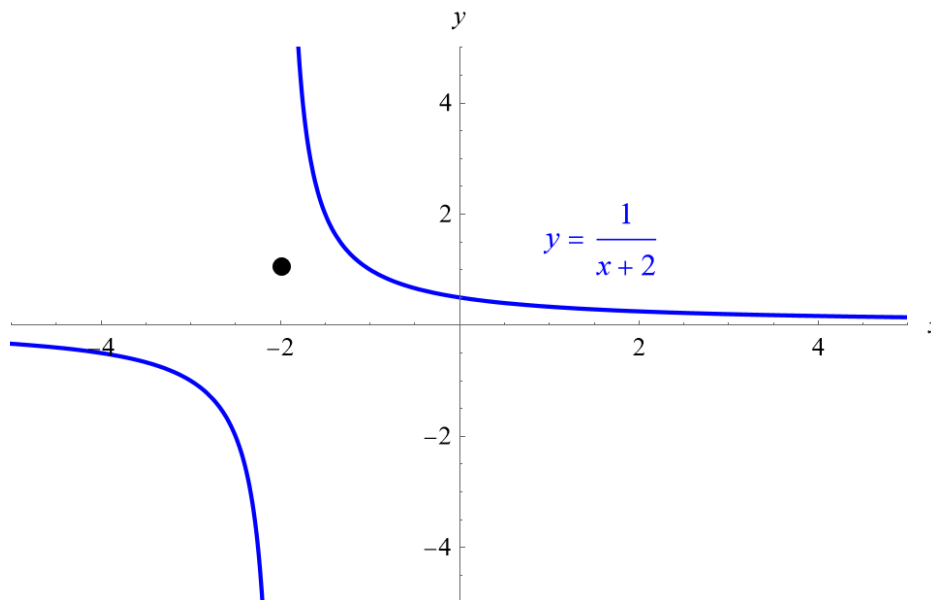
Exercise 18

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

$$f(x) = \begin{cases} \frac{1}{x+2} & \text{if } x \neq -2 \\ 1 & \text{if } x = -2 \end{cases} \quad a = -2$$

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.