Exercise 1 *Is the function*

$$f(x) = \begin{cases} 1, & x = 0 \\ \dfrac{\sin(x)}{x}, & x > 0 \end{cases}$$

continuous at $x = 0$ or $x = \pi$?

Multiple Choice:

(a) *f is continuous at both $x = 0$ and $x = \pi$.* ✓

(b) *f is continuous at $x = 0$ but not at $x = \pi$.*

(c) *f is continuous at at $x = \pi$ but not at $x = 0$.*

(d) *f is not continuous at $x = 0$ and $x = \pi$.*