

1. Is the function $f(x) = \frac{x^3 - 9x}{x - 3}$, continuous at $x = 3$? Explain in terms of the definition of a continuous function.

2. Is the function $f(x) = \sqrt{x - 1}$ continuous at $x = 1$? Explain in terms of the definition of a continuous function.

3. Is the function $f(x) = \begin{cases} \sqrt{-x} & \text{if } x \leq 0 \\ x^2 & \text{if } x > 0 \end{cases}$ continuous at 0? Explain in terms of the definition of a continuous function.