

Intellectual Need Task for Continuity

For each of the functions below, at which points (if any) is the function not continuous?

- $f(x) = \begin{cases} 2x^3 + 1 & x \geq 0 \\ -3x + 1 & x < 0 \end{cases}$

- $g(x) = \frac{x^2 - 4}{x - 2}$

- $h(x) = \sin\left(\frac{1}{x}\right)$

- $j(x) = x \sin\left(\frac{1}{x}\right)$

- $k(x) = \left|\frac{1}{x}\right|$