

Checkup2C

Name: _____

- Recite and explain the definition of continuity
- Find and name points of discontinuity
- Extend functions to be continuous

1. Recite and explain the definition of continuity.

2. Discuss the Continuity/Discontinuity of:

$$k(x) = \begin{cases} \frac{x^2 - 9}{x - 3} & \text{if } x \neq 3 \\ 6 & \text{if } x = 3 \end{cases} \quad \text{at } x = 3$$

3. Extend the following function to be continuous at $x = 3$:

$$f(x) = \frac{x^2 - 9}{x - 3}$$