

M317 Assignment 6

1. (a) Show that $f(x) = x^2$ is continuous at $x = 2$.
(b) Show that $f(x)$ is continuous at all $x_0 \in \mathbb{R}$.

2. (a) Show that $f(x) = \frac{1}{x-2}$ is not continuous at $x = 2$.
(b) Show that $f(x) = \frac{1}{x-2}$ is continuous at $x = 4$.
(c) Show that $f(x) = \frac{1}{x-2}$ is continuous at all $x = x_0 \neq 2$.