

Instructor: Dr. Rola Alseidi	Philadelphia University (P. U) Faculty/College of Science Department of Mathematics Quiz 1	Academic Year: 2022/2023. Semester: Second. Date: 27/3/2023. Course Title: Real Analysis (2) Duration of Quiz: 15 minutes.
Name:		

- The exam consists of **1 pages**. Make sure you have all of them.

1. (3 points) Circle True or False. Read each statement carefully before answering.

- (a) True False If the function $f : A \rightarrow \mathbb{R}$ is uniform continuous on A , then it is continuous.
- (b) True False If the function $f : A \rightarrow \mathbb{R}$ is continuous at $c \in I$, then it has a derivative at c .
- (c) True False A strictly monotone function has an inverse.

2. (2 points) Assume that there exists a function $L : (0, \infty)$ such that $L'(x) = 2x$ calculate the derivative of $f(x) = L(2 \cos^2(x))$

3. (3 points) Show that $f(x) = \frac{1}{x-2}$ is not uniform continuous on $(2, \infty)$.