

Instructor: Dr. Rola elseidi	Philadelphia University (P. U) Faculty/College of Science Department of Mathematics Quiz 2	Academic Year: 2022/2023. Semester: First. Date: 20/12/2022. Course Title: Calculus (1) Duration of Quiz: 15 minutes.
Name:		

1. (10 points) Choose the correct answer and fill your answers in the table provided. (Show the details of your work)

Question	1	2	3	4	5
Answer					

1. If $f(x) = \sqrt{x} + 1, x \geq 0$, then $f^{-1}(x) = :$

(A) $x - 1$
(E) $\frac{1}{\sqrt{x+1}}$

(B) $(x - 1)^2$

(C) $x^2 - 1$

(D) $(x + 1)^2$

2. Let $f(x) = x^3 + x + 1, f^{-1}(x) = 1$. Then $x = :$

(A) 3

(B) -3

(C) -1

(D) 1

(E) 0.

3. $\sin(2 \cos^{-1}(\frac{1}{3})) = :$

(A) $\frac{4\sqrt{5}}{9}$
(E) None

(B) $\frac{2\sqrt{5}}{9}$

(C) $\frac{2\sqrt{8}}{9}$

(D) $\frac{4\sqrt{8}}{9}$

4. $\sin^{-1}(\sin(\frac{2\pi}{3})) = :$

(A) $\frac{4\pi}{3}$

(B) $\frac{2\pi}{3}$

(C) $\frac{-\pi}{3}$

(D) $\frac{-2\pi}{3}$

(E) $\frac{\pi}{3}$

5. One of the following function has an inverse :

(A) $f(x) = |x - 1| + 1$

(B) $f(x) = x^2, x \in [-2, 2]$

(C) $f(x) = \sin(x), x \in [0, \pi]$

(D) $f(x) = x^2 - 2x, x \geq 1$

(E) $f(x) = \cos(x), x \in [-\frac{\pi}{2}, \frac{\pi}{2}]$
