Quiz 1

⚠ This is a preview of the published version of the quiz

Started: Mar 18 at 11:33am

Quiz Instructions

This quiz covers the topics in Homework 6 and 7.

It is not timed or proctored. You have a maximum of three attempts.

Question 1	1 pts

The inverse function of $f(x) = \sqrt[3]{3x - 1}$ is

○ $f^{-1}(x) = \sqrt[3]{-3x + 1}$

○ $f^{-1}(x) = \sqrt[3]{3x - 1}$

○ $f^{-1}(x) = \frac{x^3 + 1}{3}$

○ $f^{-1}(x) = \frac{x^3 - 1}{3}$

Question 2	1 pts

The inverse function of $f(x) = \frac{2x+3}{x-3}$ is

○ $f^{-1}(x) = \frac{2x+3}{x-2}$

○ $f^{-1}(x) = \frac{2x+3}{x-3}$

○ $f^{-1}(x) = \frac{3x+2}{x-3}$

○ $f^{-1}(x) = \frac{3x+3}{x-2}$

Question 3   1 pts

The function $f(x) = x^2 - 2x$ has an inverse function when x belongs to the interval

○ $[0, 2]$

○ $[-1, 2]$

○ $[-1, 1]$

○ $[0, 3]$

Question 4   1 pts

Let $f(x) = x^3 + x + 3$. Find $f^{-1}(1)$.

○ -3

○ 1

○ 3

○ 0

○ -1

Question 5   1 pts

Find the solution(s) to the equation $x^{2/3} = 9$

○ -27

○ 27 and -27

○ 27

○ 9 and -9

Question 6   1 pts

Find the solution(s) to the equation $x^{3/2} = 4$

○ -8

○ $\sqrt[3]{16}$

○ 8

○ $\sqrt[3]{16}$ and $-\sqrt[3]{16}$

Question 7   1 pts

The equation $x + 1 = \sqrt{x + 3}$ implies that

○ $x^2 - 2 = 0$

○ $x^2 - x - 2 = 0$

○ $x^2 - x + 4 = 0$

○ $x^2 + x - 2 = 0$

Question 8   1 pts

The domain of the function $\sqrt{x - 2} + \sqrt{2 - 2x}$ is

○ $x \geq 2$

○ Not defined for any x

○ $x \leq 1$

○ $1 \leq x \leq 2$

Question 9   1 pts

The domain of the function $\sqrt{x(1-x)(x-2)}$ is

○ $(-\infty, 0] \cup [1, 2]$

○ $[1, \infty)$

○ $(-\infty, 0] \cup [2, \infty]$

○ $[0, 1] \cup [2, \infty)$

Question 10   1 pts

The domain of the function $x^{1/3}(1-x)^{2/3}$ is

○ $[0, \infty)$

○ $(-\infty, \infty)$

○ $[0, 1]$

○ $(-\infty, 1]$

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