Assignment 5A - Objective

The due date for submitting this assignment has passed. As per our records you have not submitted this assignment.

1) The function \( f(x) = |x| \) is differentiable at \( x = 0 \).
   - True
   - False

No, the answer is incorrect.
Score: 0
Accepted Answers:
False

2) Define the function \( f : (0, \infty) \to \mathbb{R} \) as \( f(x) = \tan x \), for all \( x \neq \pi/2 \), and \( f(\pi/2) = 0 \). Then
   \[ f \text{ is differentiable at all } x \in (0, \pi) \text{.} \]
   \[ f \text{ is not differentiable at all } x \notin \{\pi/2\}, \text{ and NOT differentiable at } x = \pi/2. \]

No, the answer is incorrect.
Score: 0
Accepted Answers:

3) Let \( f(x) = x^2 + 1 \) and \( g(x) = x^2 - 3x + 2 \). Then the function \( \sqrt{fg} \) is well defined and differentiable on

   \( \mathbb{R} \)
   \( \mathbb{R} \setminus \{2, 3\} \)
   \( \mathbb{R} \setminus \{2, 3\} \)
   \( \mathbb{R} \setminus \{2, 3\} \)

No, the answer is incorrect.
Score: 0
Accepted Answers:
\( \mathbb{R} \setminus \{2, 3\} \)