



Bilkent University

Quiz # 03  
Math 101-Section 05 Calculus I  
12 October 2023 Thursday  
Instructor: Ali Sinan Sertöz



Name & Lastname: .....

Department: .....

Student ID: .....

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**Q-1)**

- (a) Let  $f(x) = \sin(\cos^2[(x^2 + 1)^7])$ . Calculate  $f'(x)$ . Do not simplify!
- (b) Let  $y$  be a differentiable function of  $x$  satisfying  $x^4 + y^7 + xy + 1 = 20y^3$ . Write an equation for the tangent line of the curve defined by this equation at the point  $(x, y) = (2, 1)$

Show your work in detail unless asked otherwise. Correct answers without detailed explanation do not get any credit.

Grading: 5+5=10

**Answers:**