



Quiz # 2  
Math 101-Section 01 Calculus I  
6 October 2017, Friday  
Instructor: Ali Sinan Sertöz  
**Solution Key**



Bilkent University

Your Name: .....

Your Student ID: .....

---

**Q-1)** Fill in the following boxes if the required number exists; otherwise put a cross  $\times$  in the box.  
(2 points each)

$$f(x) = 3x^3 + 6x + 6,$$

$$f''(3) = \boxed{54}$$

$$g(x) = \frac{x^2 + x + 1}{7x - 1}$$

$$g'(1) = \boxed{-\frac{1}{12}}$$

$$h(x) = \begin{cases} x & x \leq 0, \\ 2x & x \geq 0. \end{cases}$$

$$h'(0) = \boxed{\times}$$

$$F(x) = \begin{cases} x^3 & x \leq 0, \\ x^2 & x \geq 0. \end{cases}$$

$$F'(0) = \boxed{0}$$

$$G(x) = \begin{cases} x^3 & x < 0, \\ x^2 & x > 0. \end{cases}$$

$$G'(0) = \boxed{\times}$$

For extra 2 points!

$$F(x) = \begin{cases} x^3 & x \leq 0, \\ x^2 & x \geq 0. \end{cases}$$

$$F'''(0) = \boxed{\times}$$