الجامعة المصرية
للتعلم الإلكتروني الأهلية

EELU

THE EGYPTIAN E-LEARNING UNIVERSITY

Assignment	Announcement	Due Date
Two	11-12-2020	14-12-2020

Question No.1 (2 degree)

Use the given graph of f(x) to answer the following questions:

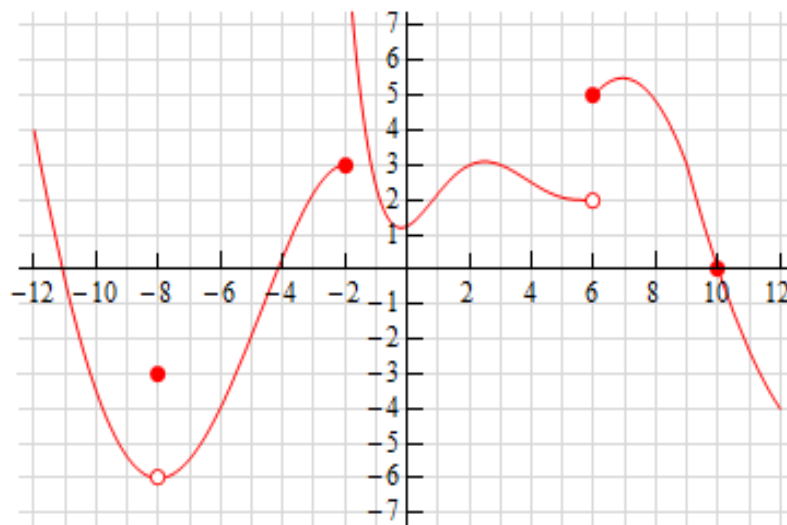**1. Evaluate:**

a) $\lim_{x \to 10} f(x) =$

b) $\lim_{x \to 6^-} f(x) =$

c) $\lim_{x \to 6^+} f(x) =$

d) $\lim_{x \to 6} f(x) =$

e) $\lim_{x \to -8} f(x) =$

f) $f(-8) =$

Question No.2 (2 degrees)

Evaluate the limit.

a) $\lim_{x \to 1} \frac{\sqrt{x+15}-4}{x-1}$

b) $\lim_{x \to 9} \frac{\sqrt{x}-3}{x-9} =$

Question No.3 (2 degrees)

Evaluate the limit.

a) $\lim_{x \to 0} \frac{\sin^2(2x)}{2x^2}$

b) $\lim_{x \to 0} \frac{x}{\frac{1}{x+7}-\frac{1}{7}}$

a) $\lim\limits_{x\to\infty} \dfrac{6x^3-4x^2+2x-7}{2x^3-16}$

b) $\lim\limits_{x\to\infty} \dfrac{x^2-9}{(2x+1)^2}$

Question No.5 (2 degrees)

State whether the function is continuous at the given x values.

$f(x) = \begin{cases} \dfrac{1}{x^2+5}, & x \le -2 \\ 3^x, & -2 < x < 1 \\ \cos(3\pi x), & x \ge 1 \end{cases}$

a. Continuous at $x = -2$?

b. Continuous at $x = 1$?