Quiz-2

Muhammad Umar Farooq

Math 108- Calculas and analytical Geometry

Question#01

(1) Draw the graph of following function, also find its domain and range.

$$f(x) = \frac{\sqrt{x+2}}{x^2-9}$$

(1) Domain ⇒ $[-2, 3) \cup (2, \infty)$

Range ⇒ $(-\infty, \infty)$

$$y(s) = \frac{\sqrt{x+2}}{x^2-9}$$

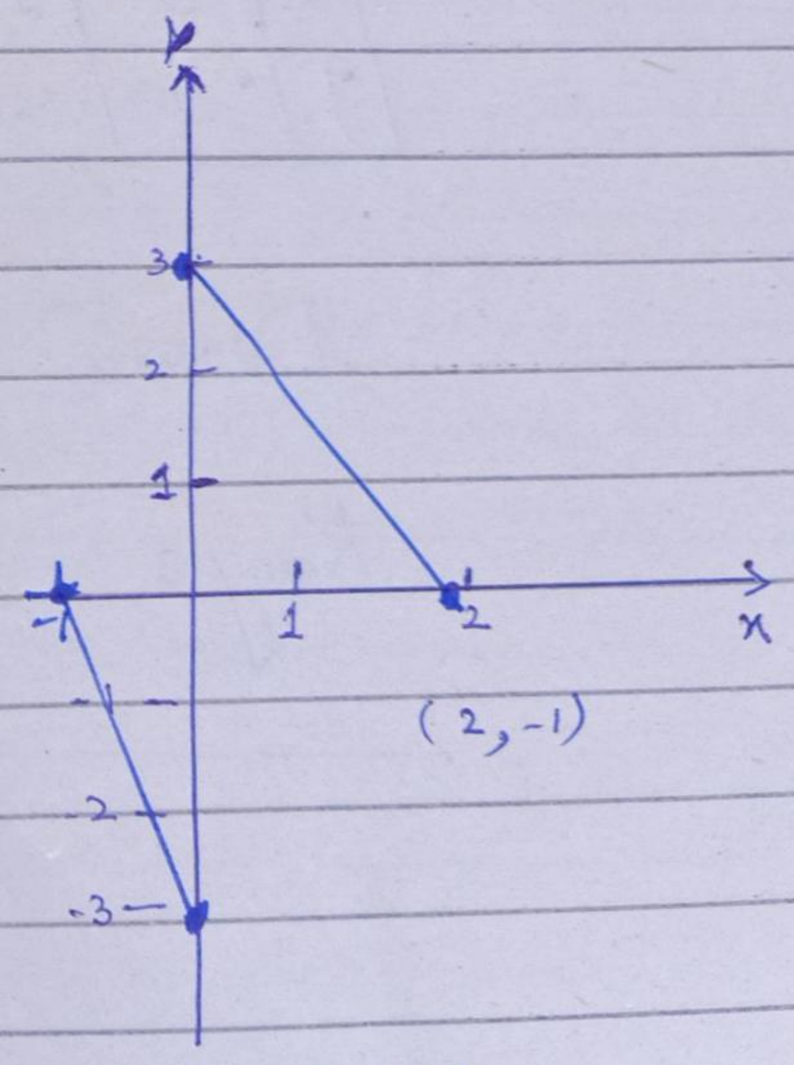
x	0	1	-1	2	-2
y	0	-0.157	-0.21	-0.125	-0.4	0

Domain $[-2, \infty) - \{+3\}$

Range $= [0, \infty)$

Question #02

Write the formula for following Graph of a function.



Line through $(-1, 0)$ and $(0, -3)$ —(i)

$$m = \frac{-3-0}{0-(-1)} = -3$$

So $y = -3x - 3$

$(0, 3)$ and $(2, -1)$ — (ii)

$$m = \frac{-1-3}{2-0}$$

$$= \frac{-4}{2}$$

$$= -2$$

So $y = -2x + 3$

$$f(x) \begin{cases} -3x-3, & -1 \le x \le 0 \\ -2x+3, & 0 < x \le 2 \end{cases}$$