Birzeit University

Mathematics Department

First semester 2021-2022

MATH1411- Quiz 1(A)

Excellent $\frac{4}{5}$

Name: ....

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1) The domain of the function $f(x) = \sqrt{x^2 - 4}$ is

a) $(-\infty, \infty)$

~~b) $[-2,2]$~~

c) $(-\infty, -2] \cup [2, \infty)$

d) $(-\infty, \infty)\backslash\{\pm 2\}$

$x^2 - 4 =$ $x^2 = 2$

2) $\lim_{t \to 4} \frac{t - \sqrt{3t+4}}{t-4} =$

a) $\frac{5}{8}$

b) -1

c) 0

d) Does not exist

$1 - \frac{3}{\sqrt{3t+4}}$

3) If g(x) is continuous function

$g(x) = \begin{cases} y^2 + a & , y < -2 \\ 3 - 3y & , y \geq -2 \end{cases}$, Then the value of a=

a) -5

b) 5

c) 9

d) -9

$y^2 + a$

$4 + a = 3 + 6$

4) the graph of $f(x) = \frac{x^2+3x+1}{4x^2-9}$ has horizontal asymptote at

a) x=3/2

b) y=3/2

c) x=1/4

d) y=1/4

5) The function $f(x) = x^4 - x^2 - 2x + 1$ has a root in the interval

a) (0,1)

b) (-1,0)

c) (2,3)

d) f has no roots

$4x^3 - 2x - 2$

$12x^2 - 2$