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

$1 - \frac{3}{\sqrt{3t+4}}$ $12+4$ $\frac{4}{4} = \frac{3}{4}$ $\frac{3}{24}$ $\frac{3}{8}$

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

$y^2 + a$
$4 + a = 3 + 6$
$a =$

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

$4x^3 - 2x - 2$
$12x^2 - 2$