Quiz 2

● Graded

Student

Colin Cano

Total Points

9.5 / 10 pts

Question 1

Question 1

5 / 5 pts

✔ **– 0 pts** Correct: (a) $[-3, 3]$, (b) $[1, 3]$, (c) even, (d) no, (e) $(-3, -1)$

– 1 pt **Part (a)** is not $[-3, 3]$

– 0.5 pts Part (a) has correct values but with parentheses instead of brackets.

– 1 pt **Part (b)** is not $[1, 3]$

– 0.5 pts Part (b) has correct values but with parentheses instead of brackets

– 1 pt **Part (c)** is not even

– 1 pt **Part (d)** is not no

– 1 pt **Part (e)** is not $(-3, -1)$

– 0 pts Click here to replace this description.

Question 2

Question 2

1.5 / 2 pts

– 0 pts **Part (a)** Correct: $\frac{1}{x^2-1}$, **Part (b)** Correct: $(-\infty, -1) \cup (-1, 1) \cup (1, \infty)$

– 0.5 pts **Part (a)**: Correct composition, but arithmetic mistake

– 1 pt **Part (a)**: Wrong or incorrect order of composition

✔ **– 0.5 pts** **Part (b)** : Computational mistake or notational mistake, but correct idea of removing zeroes of denominator

– 1 pt **Part (b)** Incorrect

Question 3

Question 3

3 / 3 pts

✔ **− 0 pts** Correct: (a) parabola with vertex at (0,0), (b) shift left by 2, (c) parabola with vertext at (-2, 0)

− 1 pt **Part (a)** Incorrect: not parabola

− 0.5 pts **Part (a)** Incorrect shape (but at least three correct points plotted) or points plotted incorrect (but correct shape)

− 1 pt **Part (b)** Incorrect: answer isn't Shift left by 2

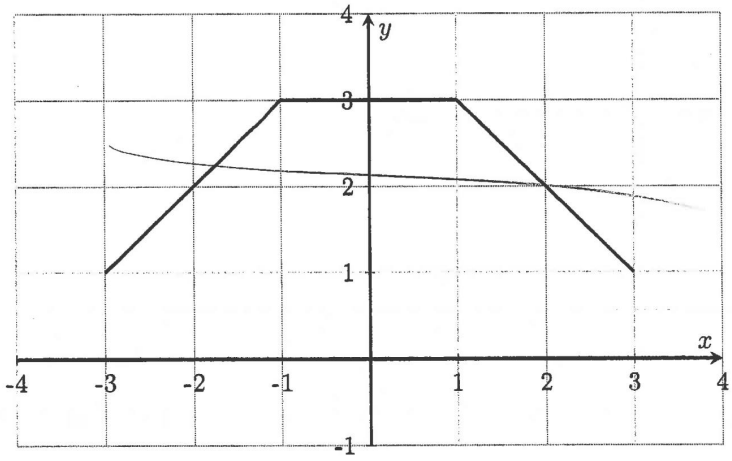
− 1 pt **Part (c)** Incorrect: not parabola which is shifted left by 2 units

− 0.5 pts **Part (c)** Incorrect shape (but at least three correct points plotted) or points plotted incorrect (but correct shape)

MATH:1850 **Quiz 2** Fall 2024
TA:

Name: Colin Cano **Student ID:** _____

1. Consider the following graph of a function:



(a) Write the domain of the function in interval notation: $[-3, 3]$

(b) Write the range of the function in interval notation: $[1, 3]$

(c) Is the function even, odd or neither? Even

(d) Is the function one-to-one? no

(e) On what interval is the function increasing? $[-3, -1]$

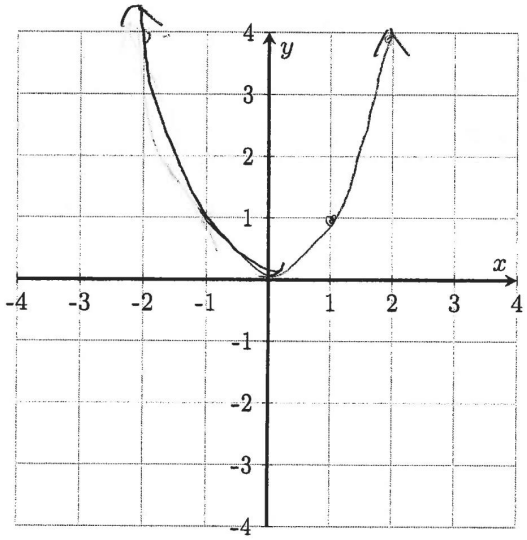
2. Consider the functions $f(x) = \frac{1}{x-3}$ and $g(x) = x^2 + 2$.

(a) Write the composition: $f \circ g(x) = f(x^2+2) = \frac{1}{(x^2+2)-3}$

(b) What is the domain of $f \circ g(x)$? Domain: $(-\infty, -1) \cup (1, \infty)$

3. (a) Sketch the graph of $g(x) = x^2$.

x^2	y
2	4
1	1



(b) What transformations do you need to apply to the above graph to obtain the graph of $f(x) = (x+2)^2$?

move it 2 spaces to the left

(c) Sketch the graph of $f(x) = (x+2)^2$.