

Name:

QUIZ – MATH GRADE 11 SL

1. (40%) Describe the sequence of operation(s) done on the function in each case:

- a. (4%) $f(x) \rightarrow f(x + 5)$ _____
- b. (6%) $f(x) \rightarrow f(x - 1) + 2$ _____
- c. (6%) $g(x) \rightarrow -2g(x)$ _____
- d. (24%) $s(x) = x^2 \rightarrow h(x) = -2(x + 7)^2 + 5$
 - i) _____
 - ii) _____
 - iii) _____
 - iv) _____

2. (6%) Circle the right option: $d(x) \rightarrow d(x/2)$ will cause the function to be:

- a. Narrower
- b. Shift it 3 positions left
- c. Shift it 3 positions down
- d. Wider
- e. Shift it 3 positions up
- f. Shift it 3 positions right
- g. None of the above

3. (6%) The transformation: $d(x) \rightarrow 0.5d(x)$ is a _____

4. (10%) Given the function $f(x) = \frac{x^2 + x^{30}}{x^5}$. Write the reflection of this

function about the y axis: _____

Is $f(x) = f(-x)$? _____

Is $f(x) = -f(-x)$? _____

5. (10%) Given the function $f(x) = x^3 - x^2$. Write the reflection of this function about the x axis: _____.

6. (28%) Given the function $f(x) = (x - 2)^2 + 1$.

Shift it 5 positions to the left, 3 down, reflect it about the x axis and apply a vertical stretch factor 4. Write the expression obtained after each one of the steps.

i) _____

ii) _____

iii) _____

iv) _____