Pre-Calculus: Quiz on 2.1

Polynomial, Linear and Quadratic Functions

(Determining whether or not a polynomial is a function and finding equations for linear and quadratic functions).

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Hour: \_\_\_

SCORE: \_\_\_\_\_ / 32

Percent Correct: \_\_\_\_%

|  |  |
| --- | --- |
| 8/4 | Correct, complete, with appropriate work or explanations. |
| 6/3 | Correct strategy, minor errors, appropriate work or explanations. |
| 4/2 | Starts with appropriate strategy, some understanding, some errors. |
| 2/1 | Attempted appropriate strategy, minimal understanding. |
| 0 | Little or no understanding evident – OR – no work shown. |

Be sure to SHOW ALL WORK. Answer questions completely. Be sure to write answers in spaces provided. If work or answers are in another location, please make note of that.

There are **32** points possible.

1. Find the vertex and axis of symmetry of the following quadratic function. **(4 points each)**
2. Describe **in words** what the two graphs above look like. **(2 points each)**

Problem (A)

Problem (B)

1. Write the linear equation for the function with the points and **(4 points)**

Solution: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Find the quadratic equation that has a vertex of and point . **(4 points)**

Solution: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Determine whether the following functions are polynomials. If it is a polynomial, state the degree and leading coefficient. If it is not, then state why.**(4 points each)**

Circle **one**: YES NO

Degree = \_\_\_\_\_\_\_

Leading Coefficient = \_\_\_\_\_\_\_

If no, why? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Circle **one**: YES NO

Degree = \_\_\_\_\_\_\_

Leading Coefficient = \_\_\_\_\_\_\_

If no, why? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Find and given that and . **(4 points)**