**You must show work/explain EVERY question, even the multiple choice questions.**

1. Mr. Grow invested $2,500 in a savings account that earns 3% interest compounded annually. He made no additional deposits or withdrawals. How much money would he have in his account at the end of 4 years?

|  |  |  |  |
| --- | --- | --- | --- |
| 1) |  | 3) |  |
| 2) |  | 4) |  |

1. \_\_\_\_\_\_\_\_

2.) Solve for in the following equation:

|  |  |  |  |
| --- | --- | --- | --- |
| 1) |  | 3) |  |
| 2) |  | 4) |  |

1. \_\_\_\_\_\_\_\_

3.) Joseph’s taxi charges $10.00 for the initial service of any drive. Then, the fee for each mile is $0.75. Which type of function is represented by this situation.

|  |  |  |  |
| --- | --- | --- | --- |
| 1) |  | 3) |  |
| 2) |  | 4) |  |

3.) \_\_\_\_\_\_\_\_\_

4.) Seven less than the product of twice a number is greater than 5 more than the same number. Which integer satisfies this inequality?

|  |  |  |  |
| --- | --- | --- | --- |
| 1) | 1 | 3) | 12 |
| 2) | 2 | 4) | 13 |

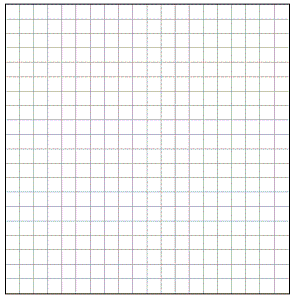
4.) \_\_\_\_\_\_\_\_\_

5.) A function f is written as . What is the value of ?

|  |  |  |  |
| --- | --- | --- | --- |
| 1) | -10 | 3) | 5 |
| 2) | -5 | 4) | 10 |

5.) \_\_\_\_\_\_\_\_\_\_

6.) Functions f(x) and g(x) are shown below.



1. Graph these functions on the coordinate plane to the

right for all domain values

1. Use the graph from part A to approximate the solution**s**

of the equation

7.) A sequence of numbers is shown below.

2, 4, 8, 16, 32, …

1. Is this an example of an arithmetic or geometric sequence? Why?
2. Using the sequence, write an equation for the nth term.
3. Find