

Practice Test – Unit 3

- Please show all of your work.
- Please work in pencil.
- Please circle your answer.

Part One

Directions: Please list the first four numbers in the following series.

$$u_0 = 2$$

_____, _____, _____, _____

1.

$$u_n = u_{n-1} + 3.6$$

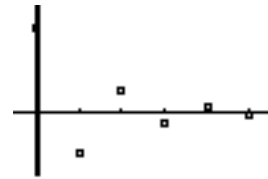
Part Two

Directions: Please identify if the following routines are arithmetic, geometric or neither.

1. _____



2. _____

**Part Three**

Directions: Consider the following series.

- Identify the next number in the series.
- State if there is a common ratio or difference by circling the appropriate word.
- Compute that ratio or difference.

1. 8, 3.5, -1, -5.5, _____ has a common ratio of _____ has a common difference of _____

2. 6, -18, 54, -162, 486, _____ has a common ratio of _____ has a common difference of _____

Part Four

Directions: Please use your graphing calculator to determine the 48 number in the following series.

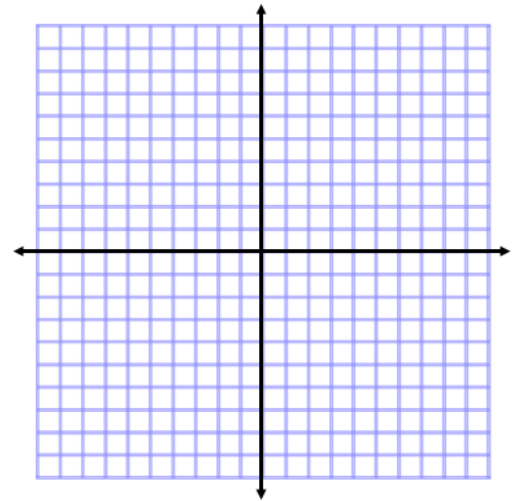
$$u_1 = 152.3$$

$$u_n = u_{n-1} - 2.8$$

Part Five

Directions: Please graph the following.

1. $193y - 289x = -8106$



Part Six

Directions: Please solve the following linear systems. Find an exact answer. State if there is no solution or infinite solutions.

1.

$$\begin{cases} 3x + 5y = 10 \\ 2x - y = 12 \end{cases}$$

2.

$$\begin{cases} y = 3x + 4 \\ -2y = -6x - 8 \end{cases}$$

Part Seven

Directions: Please estimate the following solution to the linear system by graphing by hand.

$$\begin{cases} y = 2.3x + 3.2 \\ y = -4.1x - 1.3 \end{cases}$$

