

Unit 4 HW 1

Name Key

Date _____

Period _____

For #1-3,

- Circle if each sequence is arithmetic, geometric, or quadratic.
- Write a formula for the sequence if it is arithmetic or geometric.
- Find the next three terms in each sequence.

1. 3, 12, 48, 192...

Circle One: A G Q

Formula (if A or G): $a_n = 0.75 * 4^n$ or $a_n = 3 * (4)^{n-1}$

Next 3 terms: 768, 3072, 12288

2. -3, 2, 7, 12...

Circle One: A G Q

Formula (if A or G): $a_n = -8 + 5n$ or $a_n = -3 + 5(n-1)$

Next 3 terms: 17, 22, 27

3. 5, 8, 13, 20...

Circle One: A G Q

Formula (if A or G): _____

Next 3 terms: 29, 40, 53

4. Solve the equation. Show all your steps.

$$8(3x - 4) + 2 = 5(4x + 9) + 9$$

$$x = 21$$

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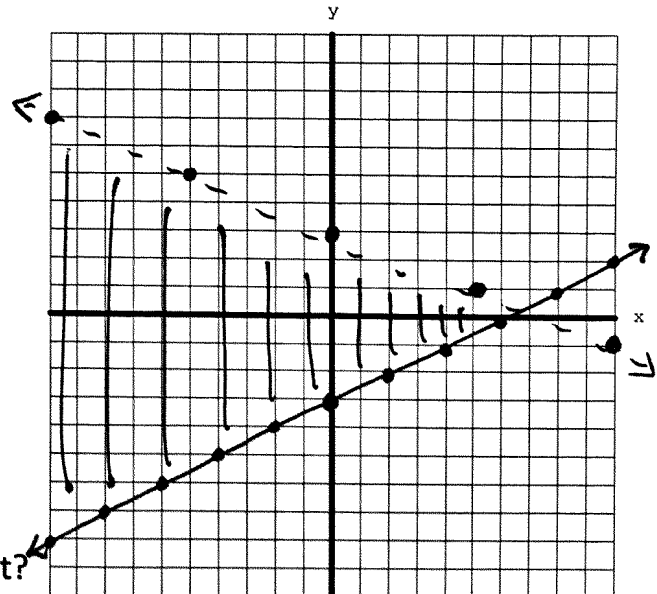
5. On tax-free weekend, I went shopping. I purchased several shirts that were on sale for \$12.49 each, as well as a jacket for \$19.99. The following equation represents my situation that day.

$$\$12.49x + \$19.99 = \$107.42$$

- a. What VOCABULARY word does the \$19.99 represent? *constant*
- b. What VOCABULARY word does the \$12.49 represent? *coefficient*
- c. What does the \$107.42 mean IN CONTEXT OF THE SITUATION? *see teacher*
- d. What does the \$12.49x mean IN CONTEXT OF THE SITUATION? *see teacher*

6. Graph the system of inequalities and answer the questions that follow.

$$\begin{aligned} 2x + 5y &< 15 \\ x - 2y &\leq 6 \end{aligned}$$



- a. Is (5,1) part of the solution? Why or why not?
No → know why
- b. Is (-2, -4) part of the solution? Why or why not?
YES → know why
- c. Is (2, -6) part of the solution? Why or why not?
No → know why