Unit 4 HW 12 Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period: \_\_\_\_\_\_

1. Solve.

$$-4(x+5)+3\left(2x-2\right)=4\left(3-4x\right)+7$$

1. Simplify.

|  |  |
| --- | --- |
| * 1. $\left(4x^{2}-7x+14\right)+(3x+5x^{2}-6)$
 | * 1. $\left(4x^{2}-7x+14\right)-(3x+5x^{2}-6)$
 |
| * 1. $\left(4x^{2}-7x+14\right)(3x+5x^{2}-6)$
 |  |

1. At a restaurant the cost for a breakfast taco and a small glass of milk is $2.10. The cost for 2 tacos and 3 small glasses of milk is $5.15. Find the cost of a taco, and the cost of a small glass of milk.
2. Mrs. Pischke has had enough of student cell phones. She decides to collect as many as she can in one school day and throw them off the top of the school, at a height of 200 feet. She is pretty strong and can throw them at a velocity of 96 feet per second. Using this information answer the following questions: $y=-16t^{2}+v\_{0}t+c$
	* 1. What the maximum height of the cell phones?
		2. How long does it take for the cell phones to reach the maximum height?
		3. What would you have to find to figure out how long the cell phones were in the air? Circle one.

VERTEX X-INTERCEPTS Y-INTERCEPT

For #’s 5 and 6.

a. Circle if each sequence is arithmetic, geometric, quadratic, or none of these.

b. Write a formula for the sequence **if it is arithmetic or geometric**.

c. Find the next three terms in each sequence.

1. 128, 64, 32, 16… Circle One: A G Q None

Formula (if A or G):

 Next 3 terms: \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

1. 8.5, 6, 3.5, 1… Circle One: A G Q None

Formula (if A or G):

 Next 3 terms: \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_