Unit 2 HW 1 Name_____ Date_____ Period_____

Simplify.

1. $-16(-5)^2 + 1$

Solve.

2. $\frac{4x+3}{5} = \frac{2x-6}{4}$

3. Sara and two friends had dinner at a Spanish restaurant that charges \$6 per meal, and \$5 per appetizer. The three of them shared several meals and appetizers. The bill for each person was \$4.32.

$$\frac{6M}{3} + \frac{5A}{3} = 4.32$$

a. What does $6M$ represent in the context of the problem?

b. What does A represent in the context of the problem?

c. What is the vocabulary word for 4.32? _____

d. Why are the first two terms being divided by 3?

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4. Solve for y.

a. $4x + 8y = 32$

b. $-8x + 5y = 25$

5. Mr. Sacco needs coffee to function. He has an 8 ounce mug and a 20 ounce mug. Mr. Zimmer will only allow Mr. Sacco to drink 100 ounces of coffee each day.

a. Write an equation/inequality for the possible number of 20 ounce mugs and 8 ounce mugs Mr. Sacco could drink in a day.

b. If Mr. Sacco has 3 twenty ounce glasses in the morning and then breaks his mug, at most how many 8 ounce glasses can he have in the afternoon?

6. On the TV show, *The Big Bang Theory*, Penny tells Sheldon that she can make 20 Penny Blossoms in one day and she makes $0.50 profit on each Penny Blossom, how much money can she make in a year?