Unit 2 HW 3

Name_____   Date_____   Period_____

Show your work for full credit. Use appropriate answers.

1. Simplify. $-16(4)^2 + 37(4) + 89$

2. Solve. $\dfrac{12-15x}{-28} = 21$

3. A taxi cab in New York City costs $15 to pick you up and $0.75 per mile. The following equation represents the total cost of your cab ride. $0.75x + 15 = 105$

   a. What is the appropriate vocabulary word for $0.75x$? _____

   b. What does 105 represent in context of the problem?

   c. What the x represent in the context of the problem?

4. Solve. $7(2x - 3) - 4(x + 5) = 8(x - 1) + 3$ JUSTIFY YOUR STEPS.

5. Sarah is in trouble with her parents for sending 5000 texts in the month of October. How many texts does she send per hour? (There are 31 days in October)

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6. 3 friends brag about who can send the most text messages. Jamie claims that last month he sent 4000 texts in the month of September. José boasts that he can send 200 texts per day. Jenny sends 4 texts every hour. Which friend sends the most texts? (There are 30 days in September)

Write the equation in slope-intercept form.

7. $3x - y = 27$ 8. $-2x - 14y = 28$

9. It costs $700 to rent a banquet hall for a wedding. It costs an additional $27.50 per guest.

   a. Write an inequality to describe how many guests Josh and Jen can invite if they have a budget of $10,000.

   b. How many guest can they invite based on their budget? **Explain your answer.**