* 1. Review

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| **What you need to know & be able to do…** | **Things to remember** | **Examples** |
| Identify parts of an algebraic expression. | -Coefficients are the numbers in front of the variables.-Variables are the letters in an expression. -Constants are “plain” numbers. | 1. List the variable(s) in the expression.$$4x^{2}-7x+1$$ | 2. List the coefficient(s) in the expression.$$5xy-2x+9$$ |
| Write algebraic expressions. | Algebraic expressions DO NOT contain equality or inequality symbols. | 3. one-third of the quantity 3 more than x | 4. Write an expression to model the following phrase: the price of a meal plus a 15% tip for the meal. |
| 5. Alex purchased a 6-hour calling card. He has used t minutes of access time. Write an algebraic expression to represent how many minutes he has remaining and the units for the expression.  | 6. It costs $75 per hour plus a $65 service fee to have a home theater system set up for you. Let t represent the number of hours. Write an expression that represents the total cost.  |

**Define a variable, write an inequality, and solve each problem. Then check your solution.**

7. A number decreased by -4 is at least 9.

8. Three times a number is less than twice the number added to 8.

**Short Answer. Show all of your work, including the equations.**

9. For the expression 12x2 + 15x + 10, list any coefficients, or constants, and state the number of terms.

10. April is moving apartments. Her family needs to rent a UHaul truck to transport their furniture. The rental company charges $19.99 for the truck. Then, they charge $0.20 per mile. Write an equation that represents how much it will cost to use the truck where x = the miles driven. How much will it cost if the family drives it 40 miles? If they end up spending $34.99, how far did they have to drive?

11. You need a plumber to come to your house. Pete charges $50 to come your house and $75 per hour he is there. Paul charges $75 to come to your house and $50 for each hour he is there. Write an equation to represent the charges for both plumbers. Who is cheaper for 3 hours worth of work?

12. Jennifer is buying 10 boxes Girl Scout cookies at x dollars apiece. Shipping is $8. Write an expression to represent this situation.

13. Dequan and some friends went to play mini golf. Their total cost was $40.29, which included taxes of $4.29. Each game cost 4 dollars. Write an algebraic expression to represent the price of each mini golf game, not including taxes. (Let x represent the number of mini golf games they all played.)

14. Bill is building a sand box for his son to play in. The length is 2 feet more than the width. He used 20 feet of boards to build the walls of the sandbox. What are the dimensions of his sand box?