Algebra 1
Unit 1

Name:_____
Date:_____ Period:_____

## Unit 1 Review: Algebraic Expressions

| What you need to know & be able to do | Things to remember | Examples | |
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| 1. Identifying Parts of Algebraic Expressions | • Identify Parts of an expression<br><br>Variable<br>Constant<br>Term<br>Coefficient<br>Factors | a. Identify the:<br>$32x^2 - 8x + 4y - 9$<br>**Variables:**<br><br>**Constants:**<br><br>**Coefficients:** | b. Identify the:<br>$24x^2 - x - 7$<br>**Terms:**<br><br>**Coefficients:**<br><br>**Constants:** |
| 2. Evaluating Expressions | • Replace the variable with the value stated.<br>• Use parenthesis each time you substitute a value in for the variable! | a. Evaluate -5x – 8y when x = -3 and y = 7 | b. Evaluate $x^2 - 4x + 7$ when x = -3 |
| 3. Simplify algebraic expressions | • Distribute first, if possible<br>• Then combine like terms | a. Simplify:<br>$5x^2 - 3x + 4 - 3 + 8x$ | b. Simplify:<br>$15x + 5(2x - 4) - 11$ |
| | | c. Simplify:<br>-8x + 4(7x + 2) – 3(5x – 2) | d. Simplify:<br>$\frac{24x - 18}{6} + 4(-2x + 5) - 7x$ |

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| 4. Creating Algebraic Expressions | • Remember to look for key words and remember our "Cautions" | a. Create an expression for "F*our less than three times a number*" | b. Create an expression for "*Four more than the product of 2 and y*" |
| | | c. Create an expression for "*Ten more than the quotient of a number and three*" | d. Create an expression for "*One fourth times the difference of a number and three*" |
| | | e. Leia is selling jewelry at a craft fair. She sells earrings for $5 and bracelets for $7 each. Write an expression to represent how much money she makes after selling *e* earrings and *b* bracelets. | f. A carpenter charges a $75 flat fee plus $50 per hour. Write an expression for the total amount spent after *h* hours. |
| | | g. Nathan has $160 to spend on jeans for school. Each pair of jeans costs $40. Write an expression that represents the amount of money remaining after Nathan has purchased *j* pairs of jeans. | h. Four friends are going to split the profits earned from their handywork business. They had to spend $200 to buy supplies. Write an expression that represents how much each person will receive. |
| 5. Interpreting Algebraic Expressions | | a. The cost of renting a canoe is a flat fee of $25 in addition to $10 per hour. The expression to model this scenario is 10x + 25. Explain what the following parts represent:<br><br>x: _____<br><br>25: _____<br><br>10x: _____<br><br>10x + 25: _____ | b. Amy wants to lose 30 pounds at a rate of 2 pounds per week. An expression to model this situation is 30 – 2x. Explain what the following parts represent:<br><br>30: _____<br><br>X: _____<br><br>-2x: _____<br><br>30 – 2x: _____ |