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| **Translating Expressions**  Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  **Unit 3(B) ~ Study Guide and Examples**   1. **Identify the key words** 2. **Choose the appropriate operation** 3. **Choose a variable if one is not provided** 4. **Write the expression that goes with the given words** 5. **Re-read to ensure your answer is reasonable** | Ex: Write an expression for each   1. A number squared minus twelve 2. A number cubed plus seven 3. 8 fewer pencils than Karen 4. The quotient of a number r and 19 5. 12 less than twice a number z 6. Bella dug a trench 18 feet deeper than Josh 7. Tim swam twice the distance of his sister Sue 8. Jeff is 24 years older than Bobby |
| Evaluating Equations   1. **Plug in the value for the given variable** 2. **Solve using order of operations** | Ex:  Does the solution set { 4, 7, 16 } contain a value that makes 15m = 90 true?  Which solution set contains a solution to r -19 = 38   1. {62, 11, 57 } B) { 10, 26, 2 } |
| **One-Step Addition Equations (4-2)**   1. **Locate the variable** 2. **Perform inverse operation (subtract) to both sides of the equation to isolate the variable** 3. **Rewrite and plug in to check** | Ex: Solve and Check:  x + 11.7 = 25.3 z + 7 = 9.84 |
| **One-Step Subtraction Equations (4-2)**   1. **Locate the variable** 2. **Perform inverse operation (add) to both sides of the equation to isolate the variable** 3. **Rewrite and plug in to check** | Ex: Solve and Check  n – 26.72 = 531 96 = n – 16.4 |
| **One-Step Multiplication Equations (4-4)**   1. **Locate the variable** 2. **Perform inverse operation (divide) to both sides of the equation to isolate the variable** 3. **Rewrite and plug in to check** | Ex: Solve and Check  12x = 156 2x = 148.8 |

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| **One-Step Division Equations (4-4)**   1. **Locate the variable** 2. **Perform inverse operation (multiply) to both sides of the equation to isolate the variable** 3. **Rewrite and plug in to check** | Ex: Solve and Check  = 9 8 = |
| **Translate and Solve Word Problems (4-5)**   1. **Identify the key words** 2. **Choose the appropriate operation** 3. **Choose a variable if one is not provided** 4. **Write the equation that goes with the given words** 5. **Solve the equation using inverse operation** | Elizabeth worked 14 hours last week and earned $300. Write an equation that can be used to find how much she made each hour. Solve.  Dominick has m pieces of candy. After he gives 17 pieces away, he has 38 in his pieces left. How many pieces of candy did Dominick start off with? Write an equation and solve the problem. |
| Mike charges $17.75 an hour to mow lawns. If he mows for 3 hours, how much will he earn? | A teacher grades 90 math tests in 2.5 hours. What is the average number of tests graded per hour? |
| Simplify:  n + n4 when n = 11 6 when x=5 | On Monday, Renee walked r miles on a trail. Tuesday, she walked r+ 11 miles. If r is equal to 9 miles, how far did she walk on both days? |
| Review   * Be able to identify all properties * Be able to distinguish between a numerical expressions and an algebraic expressions * Be able to add/subtract/multiply/divide decimals and utilize these operations appropriately while attacking a word problem * Be able to use order of operations appropriately | Review  ● **About** tells you to estimate first   * When estimating, round numbers to largest place first, then perform operations. * When estimating decimals, round numbers to the whole number, then perform the operation |