**ML #4- MULTI-STEP EQUATIONS (math 7+)**

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| **Steps for Solving Multi-Step Equations**   1. Use integer Subtraction Rules 2. Distributive Property 3. Simplify both sides by combining like terms 4. Get rid of the **Constant** by doing the **inverse** **operation.** (addition or subtraction) 5. Get rid of the **Coefficient** by doing the **inverse operation** (multiplication or division) 6. Check your solution by substituting your solution in the original equation   **Solve and Check the following Equations**   |  |  | | --- | --- | | 1. m + 2m – 4 = 14 | 1. 2(5x – 3) = 14 | | 1. 3(x + 12) – x = 8 | 1. 38 = -3(4y + 2) + y | |

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| **Multi-Step Word Problems** | | |
| **Consecutive Integers** | Integers in order | Example: |
| **Consecutive *Odd* Integers** | Integers in order by odd numbers | Example: |
| **Consecutive *Even* Integers** | Integers in order by even numbers | Example: |
| **For each word problem set up an equation, solve and answer the question.**   1. If 17 is decreased by twice a number, the result is 5. 2. The sum of 3 consecutive integers is 96. Find the integers 3. If the width of a rectangle is 3 more than twice the length and the perimeter of the rectangle is 96 inches, what is the length and width of the rectangle? | | |

Practice for multi-step Equations (math 7+)

1. p + p - 13 = 171 2) –x – 16 = -13 + 5

3) -3(m – 6) = 4 4) 44 = -5(r - 4) - r

**Multi-Step Word Problems**

**For each word problem set up an equation, solve and answer the question.**

1. 4 consecutive integers whose sum is 358?
2. Find 3 consecutive even integers whose sum is 102.
3. Find 3 consecutive odd integers whose sum is -45.
4. If the area of a rectangle is 120 inches squared. Find x.

8

3x + 6

1. If the length of a rectangle is 4 less than twice the width and the perimeter of the rectangle is 64 inches, what is the length and width of the rectangle?
2. If Sara has 5 more cookies than Carla and together they have 21 cookies how many cookies does Sara have?
3. You and your friend spent a total of $15 for lunch. Your friend’s lunch cost $3 more than yours did. How much did you spend for your lunch?
4. The first number is 5 more than the second number. The sum of 4 times the first number and 2 times the second number is 92. What are the numbers?
5. If the perimeter of the triangle is 108 cm, what are the lengths of the sides?

2x + 3

3x + 1

4x + 5