**Academic/Career & Technical Related/Demonstration Lesson Plan**

**Instructor** _Jenny Piscsalko_      **Date** _Blizzard Bag 2_

**Program/Class** _Tech Math_      **Period** _5, 8_

## State Indicator/Competency:

- Explain each step in solving a simple equation as following from the equality of number asserted at the previous step, starting from the assumption that the original equation has a solution. Construct a viable argument to justify a solution method.
- Solve simple rational and radical equations in one variable, and give examples showing how extraneous solutions may arise.
- Solve linear equations and inequalities in one variable, including equations with coefficients represented by letters.

## Instructional Objective(s):

- Students will be able to solve equations consisting of combined operations with 80% accuracy.

## Materials:

- Pencil
- Blizzard Bag Packet 1
- Calculator

## Method of Instruction:

Independent Student Led

## Activities:

Students will complete the Blizzard bag assignment

Example: Solve:     $5x + 12 = 52$

$$5x = 40$$
$$x = 8$$

Example: Solve:     $-18D + 4D = 3D - 5D + 19 + 5$

$$-14D = -2D + 24$$
$$-12D = 24$$
$$D = -2$$

Example: Solve:     $14y - 6(y - 3) = 22$

$$14y - 6y + 18 = 22$$
$$8y + 18 = 22$$
$$8y = 4$$
$$y = 0.5$$

Example: Solve: $\dfrac{x^2}{6} - 36.5 = -35$

$\dfrac{x^2}{6} = 1.5$

$x^2 = 9$

$x = 3$

Example: Solve: $4 = \dfrac{130}{R+20}$

$4(R + 20) = 130$

$4R + 80 = 130$

$4R = 50$

$R = 12.5$

Example: Solve: $6\sqrt[3]{P} = 4\left(\sqrt[3]{P} + 1.5\right)$

$6\sqrt[3]{P} = 4\sqrt[3]{P} + 6$

$2\sqrt[3]{P} = 6$

$\sqrt[3]{P} = 3$

$P = 27$

**Assessment:**

Multi-Step Equations Worksheet    10 pts.

## Multi-Step Equations

1) $-20 = -4x - 6x$

2) $6 = 1 - 2n + 5$

3) $8x - 2 = -9 + 7x$

4) $a + 5 = -5a + 5$

5) $4m - 4 = 4m$

6) $p - 1 = 5p + 3p - 8$

7) $5p - 14 = 8p + 4$

8) $p - 4 = -9 + p$

9) $-8 = -(x + 4)$

10) $12 = -4(-6x - 3)$

11) $14 = -(p - 8)$

12) $-(7 - 4x) = 9$

13) $-18 - 6k = 6(1 + 3k)$

14) $5n + 34 = -2(1 - 7n)$

15) $2(4x - 3) - 8 = 4 + 2x$

16) $3n - 5 = -8(6 + 5n)$

17) $-(1 + 7x) - 6(-7 - x) = 36$

18) $-3(4x + 3) + 4(6x + 1) = 43$

19) $24a - 22 = -4(1 - 6a)$

20) $-5(1 - 5x) + 5(-8x - 2) = -4x - 8x$