Name:_____   Date:_____
PC: Solving Multivariable Linear Systems   Ms. Loughran

Do Now

Solve each of the following systems algebraically:

1.
$$8x - 4y = 4$$
$$4x - 2y = 2$$

2.
$$3x - 6y = 9$$
$$-2x + 4y = 1$$

Model

1. Solve algebraically:
$$x - 2y + 3z = 9$$
$$-x + 3y = -4$$
$$2x - 5y + 5z = 17$$

Answer is an ordered triple   (,   ,   )

Remember for a system of linear equations, exactly one is true:

1. There is exactly one solution
2. There are infinitely many solutions.
3. There is no solution.

For 2-6, solve the system of linear equations.

$$3x - 2y + 4z = 1$$
2. $x + y - 2z = 3$
$$2x - 3y + 6z = 8$$

$$4x + y - 3z = 11$$
3. $\quad 2x - 3y + 2z = 9$
$$x + y + z = -3$$

$$x + y - 3z = -1$$
4. $\quad y - z = 0$
$$-x + 2y = 1$$

5.
$$x + y + z = 5$$
$$-4x + 2y - 3z = -9$$
$$2x - 3y + 2z = 5$$

6.
$$x + y - 5z = 3$$
$$x - 2z = 1$$
$$2x - y - z = 0$$

Practice
(Courtesy of Kuta Software)