Algebra 2   Name: _____
Homework: Solving a System of EQs in 3 variables   Date: _____
Using Elimination

The first two problems are new material. The last three problems are review. Work all problems so you remember how to do everything we have learned.

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1. Solve the system of equations using the ELIMINATION method. Write your answer as an ordered triple, (x, y, z).

$x + 4y - 6z = -1$
$2x - y + 2z = -7$
$-x + 2y - 4z = 5$

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2. Solve the system of equations using the ELIMINATION method. Write your answer as an ordered triple, (x, y, z).

$x + y - z = 4$
$3x + 2y + 4z = 17$
$-x + 5y + z = 8$

3. Solve the system of equations in 3 variables by the SUBSTITUTION method. Write your answer as an ordered triple, (x, y, z).

$x + y + z = 24$
$5x + 3y + z = 56$
$x + y - z = 0$

4. Use a calculator to answer the question(s).
One of the games at a carnival involves trying to ring a bell with a ball by hitting a lever that propels the ball into the air. The height of the ball is modeled by the equation $h(t) = -16t^2 + 39t$. If the bell is 25 ft above the ground, will the bell be hit by the ball?

5. Solve the system of equations by graphing and finding the point of intersection. Write your answer as an ordered pair, (x, y).
$2x + y = 5$
$x - y = 1$