Algebra II Homework #7

1) Brittany leaves a town at 8 a.m. travelling south at 56 mph. Holly leaves the same town at 11 a.m. traveling in the same direction at a speed of 97 mph. What time of day will it be when Holly is 201 miles ahead of Brittany?

2) Solve: $\dfrac{x+4}{6} - \dfrac{5x-3}{8} = 3x + \dfrac{2x+5}{12}$

3) Solve: $-|-2x+3|+6=1$

4) Find the equation of the line that is perpendicular to the line $2x+5y=-10$ and goes through the point (-4,3).

5) Simplify: $\dfrac{3}{8} - \dfrac{18}{34}(\dfrac{1}{12} - \dfrac{5}{9}) + \dfrac{3^2}{6}$

6) Solve the following system by graphing:

$3x+2y=10$ and $-2x+4y=-12$

7) Solve the following system by substitution:

$5x-y=3$ and $-6x+5y=8$

8) Solve the following system by elimination:

$6x-4y=-5$ and $3x+6y=-2$

9) Solve the following system:

$3x-5y+z=-7$ and $-4x+3y-2z=-2$ and $2x-4y+3z=8$

10) Solve the following system by graphing:

$x-3y=-3$ and $-4x+3y=-6$

11) Solve the following system by substitution:

$5x-7y=8$ and $-2x+6y=-4$

12) Solve the following system by elimination:

$8x+6y=-8$ and $-12x+8y=-3$

13) Solve the following system:

$$5x + 3y - 2z = 12 \text{ and } -3x - 2y - z = 1 \text{ and } 4x - 4y - 3z = -4$$

14) Solve the following system by graphing:

$$4x + y = -4 \text{ and } -8x - 2y = -6$$

15) Solve the following system by substitution:

$$-x + 6y = 3 \text{ and } -4x + 3y = -9$$

16) Solve the following system by elimination:

$$12x + 14y = -3 \text{ and } 18x - 21y = 4$$

17) Solve the following system:

$$x + 3y - 2z = -7 \text{ and } -2x - 4y + 3z = 7 \text{ and } 3x + 5y - z = 2$$

18) Solve the following system by graphing:

$$-x + 3y = 3 \text{ and } 2x + 3y = 12$$

19) Solve the following system by substitution:

$$3x - 6y = 6 \text{ and } -4x + 8y = -8$$

20) Solve the following system:

$$4x - 2y - 3z = -2 \text{ and } -3x - 4y + 4z = -11 \text{ and } 2x + 5y - 2z = 7$$