Beverly Hills High School -- Algebra B -- Quest #2 -- Sections 6.4-6.6 -- 70 points

Show all your work. Be neat and complete. Label all your answers that need them. NO Copying. **Pencils only.**

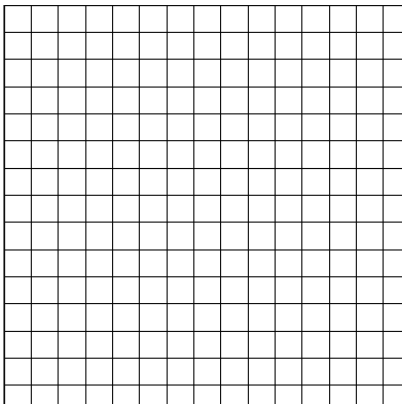
1) A woman has forty postage stamps. Some are 13¢ stamps and some are 17¢ stamps. Their total value is $6.32. Write both the number equation and the value equation and find how many of each she has. Seven points.

2) A supersonic transport plane makes the 5,400 mile journey to Paris and back. With the wind the trip takes five hours, but against the wind it takes six hours. Set up two equations and determine how fast the wind is blowing. Seven points.

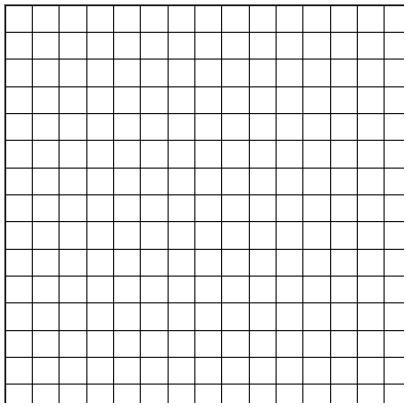
3) Selling at the last football game, Mr. Norman sold hot dogs for $2 apiece and hamburger for $3 apiece. He sold twenty more hot dogs than hamburgers and sold 156 items total. Set up the two equations that will allow you to find how many of each he sold. THEN determine how much money he brought in. Ten points on this one.

Graph the following inequalities or systems of inequalities, shading solutions appropriately (five points each).

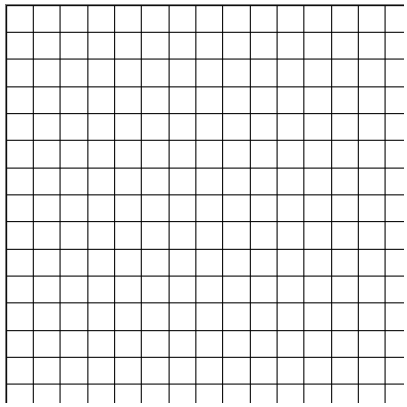
4) $y \leq -2x + 3$



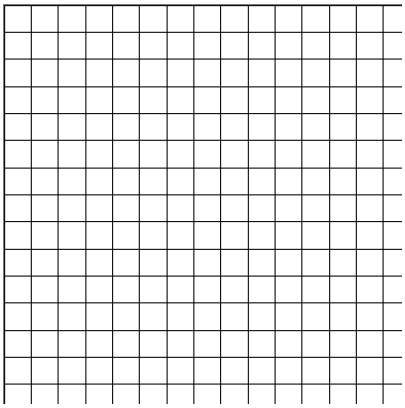
5) $x < 4$



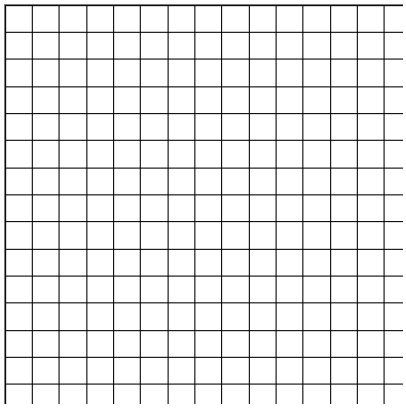
6) $x \geq -y$



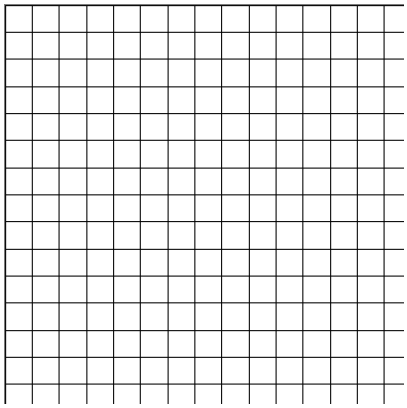
7) $3x - 4y > 12$



8) $x > -2$ and $y \leq 3$

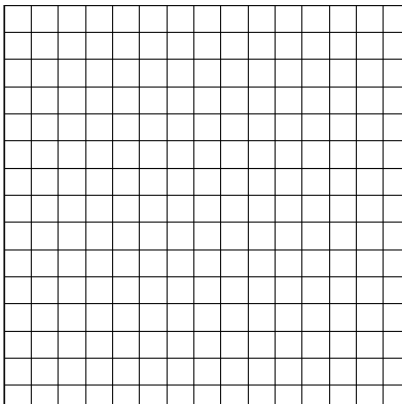


9) $y > 1/3\ x + 4$
$y < 1/3\ x - 1$



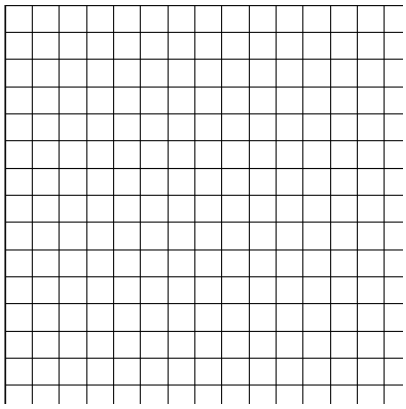
10) $y \leq -2x + 4$

$\frac{1}{2}x > y - 1$



11) $6 - 2x > 3y$

$\frac{1}{3}y + \frac{1}{2}x \geq 1$



12) Steve can work up to 12 hours on Friday doing his two jobs, painting houses and mowing lawns. He makes $10 an hour painting and $8 an hour mowing lawns. He needs to make at least $80 for the day. Assign variables. Graph both inequalities and show where the solution values for his work situation are. Seven points.