Name_____Date_____Per_____

Doctor, Doctor, give me the news, I've got a bad case of loving.....Math!

A local hospital is going to build a smaller clinic for pediatrics to better serve the growing community. They can hire doctors and nurses. The amount the hospital can spend a year depends on the salaries of the doctors and nurses.

Let d = the number of doctor's hired (x-axis)
Let n = the number of nurses hired (y-axis)

Write inequalities to represent the following conditions.

1. The building can accommodate no more than 100 staff.

2. A minimum of 40 staff must be hired.

3. The clinic must hire at least 25 doctors.

4. The number of doctors must be at most half the number of nurses.

Now, choose an appropriate scale and graph the four inequalities you wrote on the same grid (don't forget to show work for rewriting and shading).

After researching, you find the average pediatrician's salary is $75,000. An average nurse's salary is $50,000. The total amount of money the hospital can spend on salaries is $5,500,000. Write an equation to represent the sum of doctors' and nurses' salaries. Graph this equation with your inequalities.

What is a possible number of doctors and nurses that satisfy **all** conditions and fit within the salary budget?