

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)

Let n = the number of nurses hired (y)

Let c = the amount of money spent a year on salaries.

After researching, you find the average pediatrician's salary is \$75,000. An average nurse's salary is \$50,000. Write an equation to represent s as a function of two independent variables d and n .

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 least half the number of nurses.
5. It is impossible to hire a negative number of doctors and nurses.

What is the minimum number of doctors and nurses that satisfy **all** conditions save you the most on salaries?

Graph the inequalities and find the intersection points to solve the equation.