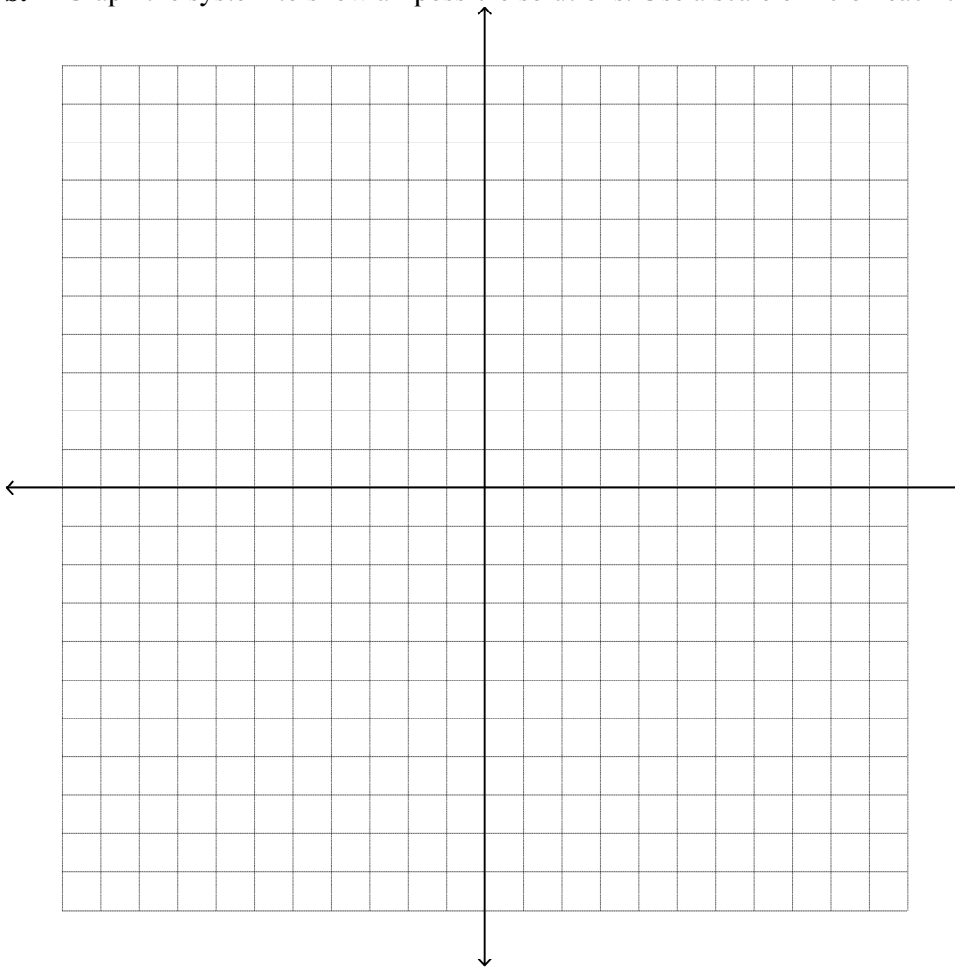


Systems of Inequalities - Word Problems

Short Answer

1. A local citizen wants to fence a rectangular community garden. The length of the garden should be at least 30 ft, and the distance around should be no more than 160 ft.
 - a. Write a system of inequalities that models the possible dimensions of the garden.

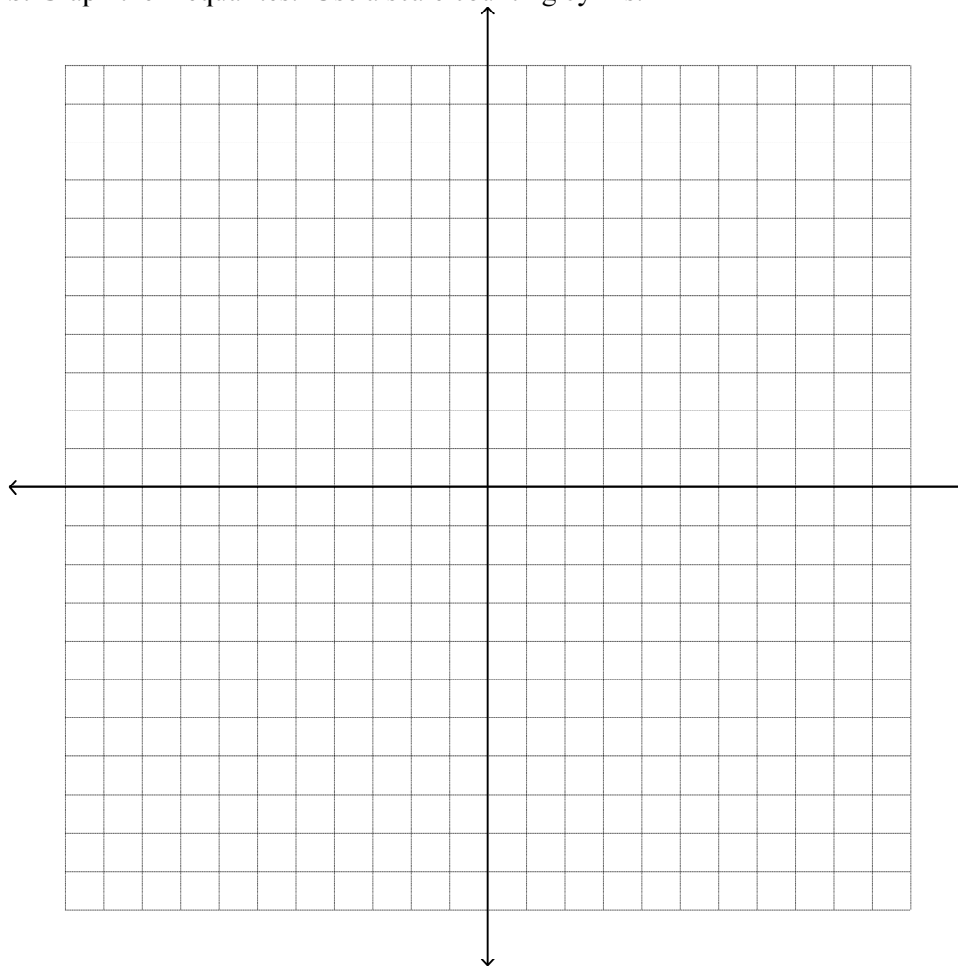
- b. Graph the system to show all possible solutions. Use a scale of 10 on each axis.



2. You have a gift certificate to a book store worth \$60 and you have no extra money so you can spend no more than that \$60. Each paperback books is \$9 and each hardcover books is \$12. You can buy no more than 3 books total.

a. Write and graph a system of inequalities to model the number of each kind of books you can buy. Let x = the number of paperback books and y = the number of hardback books.

b. Graph the inequalities. Use a scale counting by 1's.



Essay

3. Amy's restaurant has budgeted at most \$60 to spend this month on gourmet coffee. All international blends cost \$10.00 per package and all house blends cost \$6.00 per package. She would like to buy at least 3 packages of coffee..

a. Write a system of linear inequalities that describes this situation.

b. Graph the system. Use a scale counting by 1s.

c. Give a possible solution and describe what it means.

