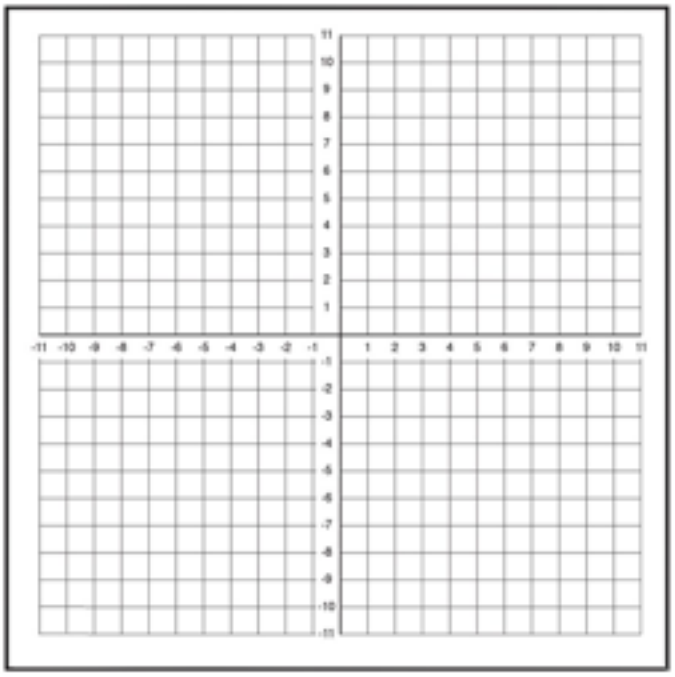
Problems Involving Linear Systems

1. The cost to print a book on printer A includes a set-up cost of $225 plus $6 per page.
The cost to print the same book on printer B includes a set-up cost of $375 plus $5.50 per page. The total cost for using each printer can be represented by the following equations:

a) Solve the system using any method

b) How many pages must a book contain for the total cost to be the same on both printers?

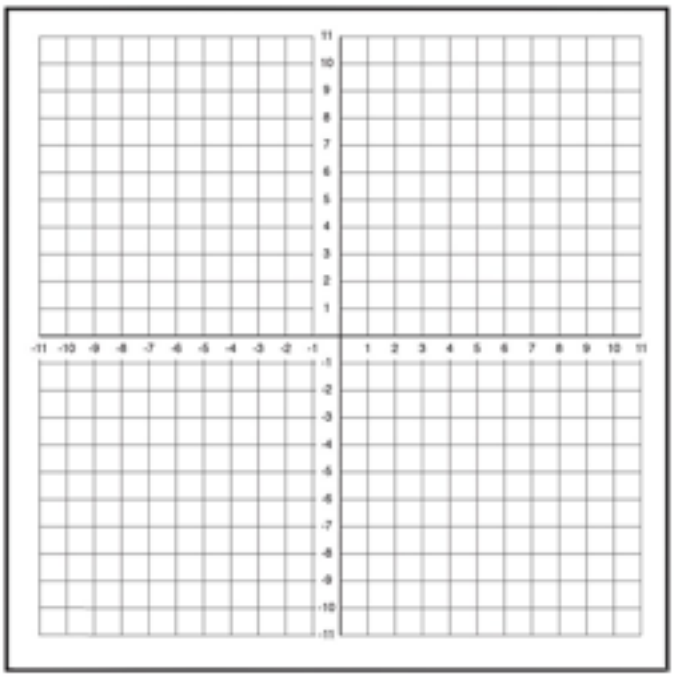
c) For what number of pages is it more economical to use printer A? printer B?



Printer A equation:
Printer B equation:

2. 3 footballs and 1 soccer ball cost $155. 2 footballs and and 3 soccer balls cost $220. What is the cost for 1 soccer ball and 1 football?
Solve the problem using any method you like.

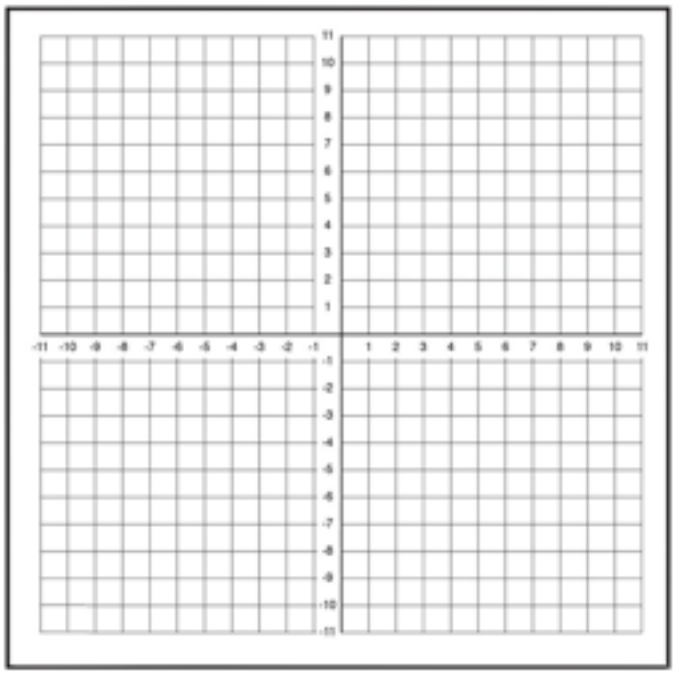
Let x represent footballs
Let y represent soccer balls



A tennis club charges an annual fee and hourly fee for court time, In one year, Jaedon played 39 h and paid $384. In the same year Sierra played 51 h and paid $456. Solve the problem using any method you want.

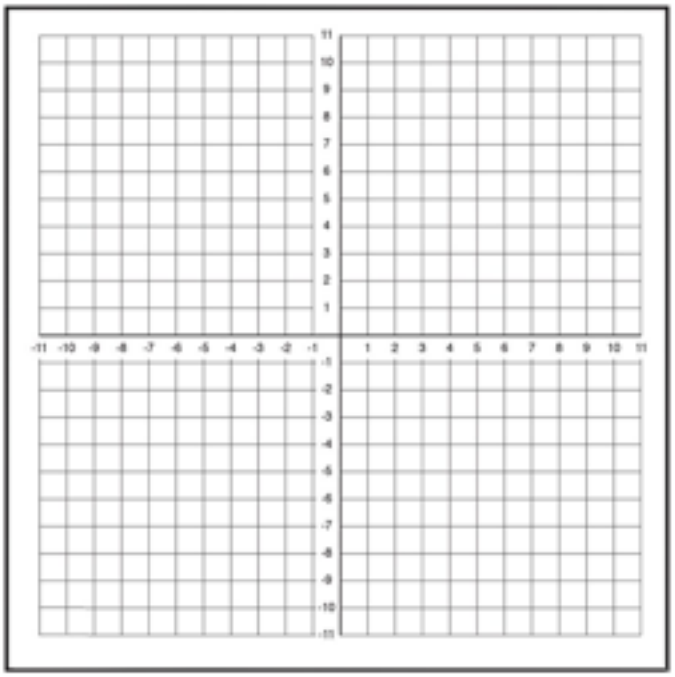
a) What is the annual fee?
b) What is the hourly fee?

Let x represent the annual fee
Let y represent the hourly fee



A local fitness club has two payment plans. Plan A: a monthly membership fee of $30, plus a fee of $1 per visit. Plan B a fee of $5 per visit and no monthly membership fee.
Which is the cheaper plan for one month? Explain
Solve using any method you like

Equation for Plan A
Equation for Plan B



A biologist studied a certain tree for 10 years. She fund that the diameter of the tree increased by 2 cm each year. When the biologist began measuring, the diameter was 80cm. This situation can be described by the equation $y = 2x + 80$

a) What does y represent in this equation?

b) what does x represent in this equation?

c) What is the diameter after 7 years?

d) After how many years has the diameter 92 cm?

x	y
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	

complete 4-39 and 4-40 in red books