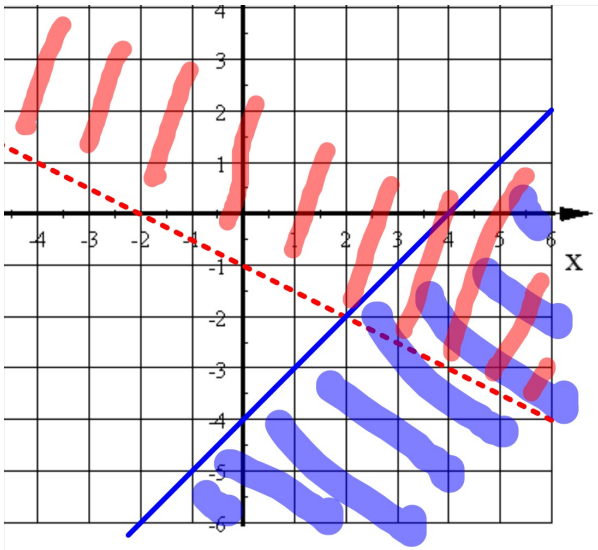
System of Inequalities:
Two inequalities on the same graph.

Solution to a system of Inequalities:
The area that gets shaded twice.



Model this graph with a system of inequalities.

You can spend no more than $96 at the store on CD's and DVD's. CD's cost $12 each and DVD's cost $16 each.

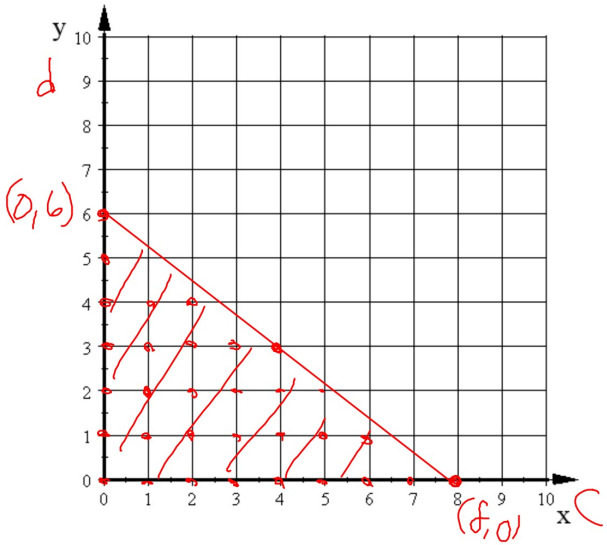
a) Model this situation with an inequality. $12c + 16d \leq 96$

b) Graph the inequality.
see next page.
c-int = 8
d-int = 6

c) Find 3 combinations of CD's and DVD's that meet the given conditions. (4,3) (1,5) (0,0)

d) How many possible combinations of CD's and DVD's are there that meet the given conditions.

30 different combinations will meet both conditions.
They are coordinates of points in the solution region.



Basketballs cost $24 each and footballs cost $18 each.

- You can spend no more than $144.
- You need at least 3 basketballs.

$24b + 18f \leq 144$

$b \geq 3$

b-int = 6 f-int = 8

1. Write a system of inequalities to model this situation.

2. Graph this system of inequalities. see next page

3. Find as many combinations of basketballs and footballs as you can that meet both conditions.

11 different combinations will meet both conditions.
They are coordinates of points in the solution region.