Minimize 
$$f(x,y) = (x-4)^2 + (y-4)^2$$

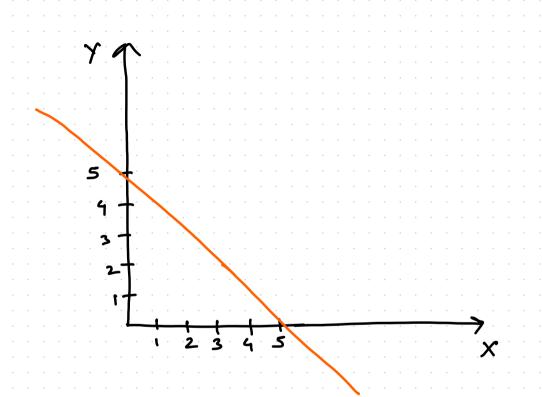
s.t. 2+y 75

Minimize 
$$f(x,y) = (x-4)^2 + (y-4)^2$$

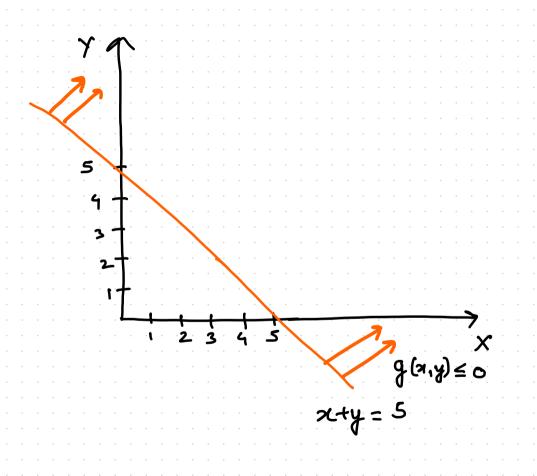
Minimize 
$$f(x,y) = (x-4)^{2} + (y-4)^{2}$$
  
s.t.  $x+y > 5$ 

 $f(x,y) = (x-4)^2 + (y-4)^2$ 

 $g(x,y) = -x-y+5 \leq 0$ 



x+y=5



CONTOURS OF 
$$f(x,y)$$
 $x^{*},y^{*}$  (UNCONSTRAINED SOLUTION)

 $f(x,y) \leq 0$ 
 $f(x,y) \leq 0$ 

CONTOURS OF 
$$f(x,y)$$

Solution)

$$g(x^*,y^*) \leq 0$$

$$Constraint Does NOT  $x+y=5$$$

Take  $part$ 

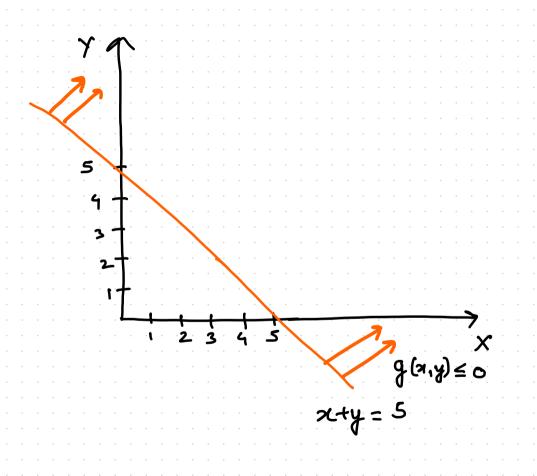
$$H=0 \Rightarrow \mu g(x,y)=0$$

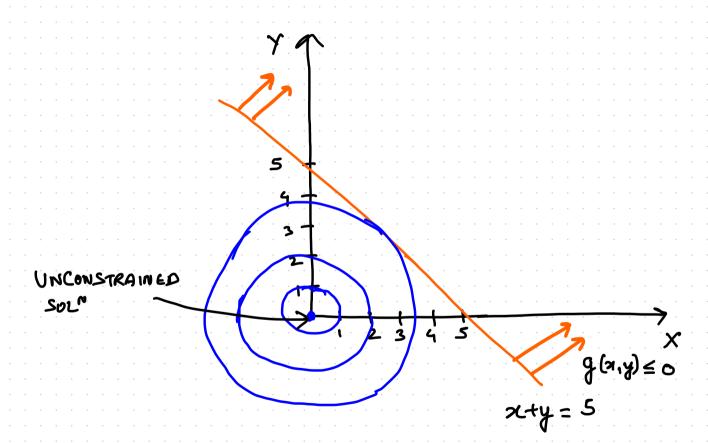
Minimize 
$$f(x,y) = x^2 + y^2$$

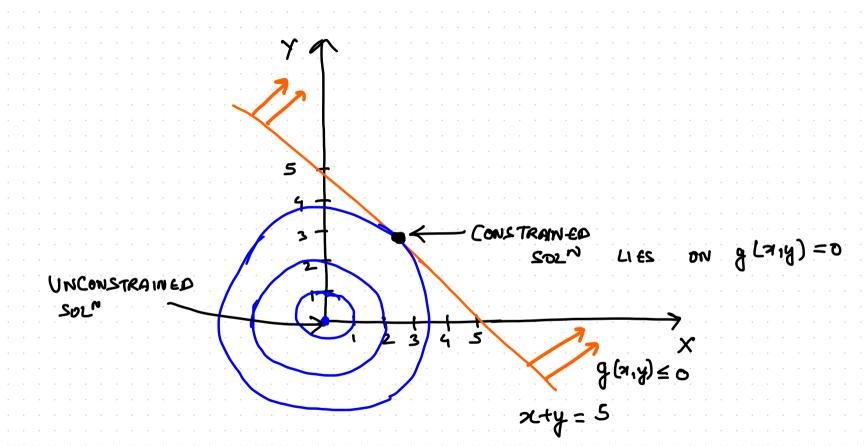
Minimize 
$$f(x,y) = x^2 + y^2$$
  
 $s.t. x+y > 5$ 

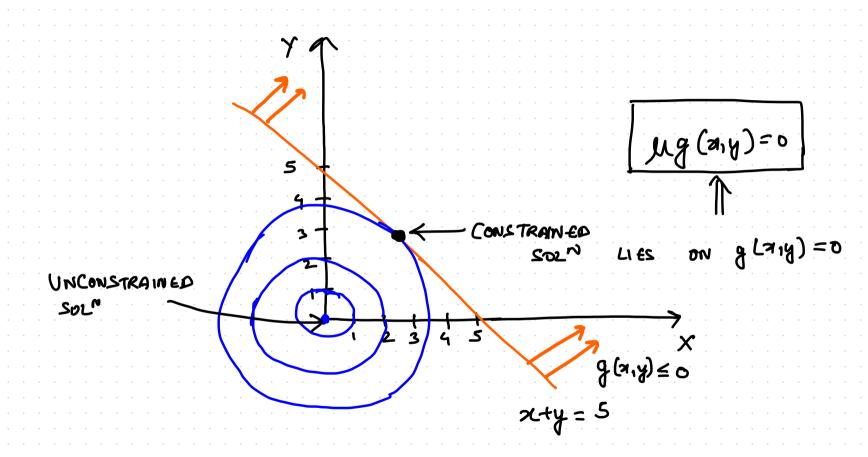
 $g(x,y) = -x-y+5 \leq 0$ 

 $f(x,y) = x^2 + y^2$ 









WHY M: 7/0 & i

CONSIDER CASE WHEN M = 0

