

Consolidation 1.5

5. b)  $x$ : # of a-la-carte dishes  
 $y$ : # of table d'hote dishes

①  $x \geq 3y$

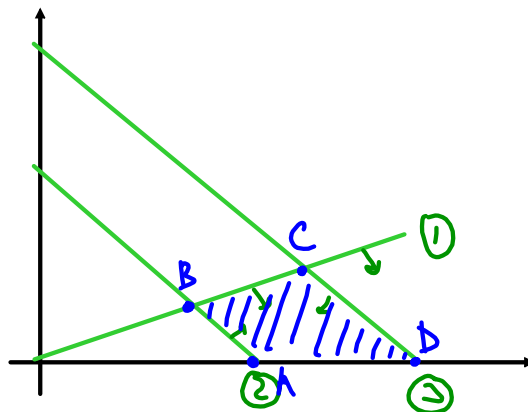
x	y
0	0
30	10
300	100

②  $x+y \geq 540$

x	y
0	540
540	0

③  $x+y \leq 900$

x	y
0	900
900	0



Vertices:

Pt. A (540,0) Pt. D (900,0)

Pt. B:  $x=3y$  ①  
 $x+y=540$  ②

$3y+y=540$

$4y=540$

$y=135$

$x+y=540$

$x+135=540$

$x=405$

B (405, 135)

Pt. C  $x+y=900$  ③

$x=3y$  ①

$3y+y=900$

$4y=900$

$y=225$

$x=3y$

$=3(225)=675$

Pt C (675, 225)

$P = 0.6(12x) + 0.75(23x)$   
 $= 7.2x + 17.25y$