1

$I = P_X X + P_Y Y$

$10{,}000 = 3000X + 5000Y$

slope of BL $= \frac{3}{5}$

$MU_X = MU_Y$

$2X = Y$

slope of IC $= \frac{2X}{Y}$

$\max U : \frac{MU_X}{MU_Y} = \frac{P_X}{P_Y}$

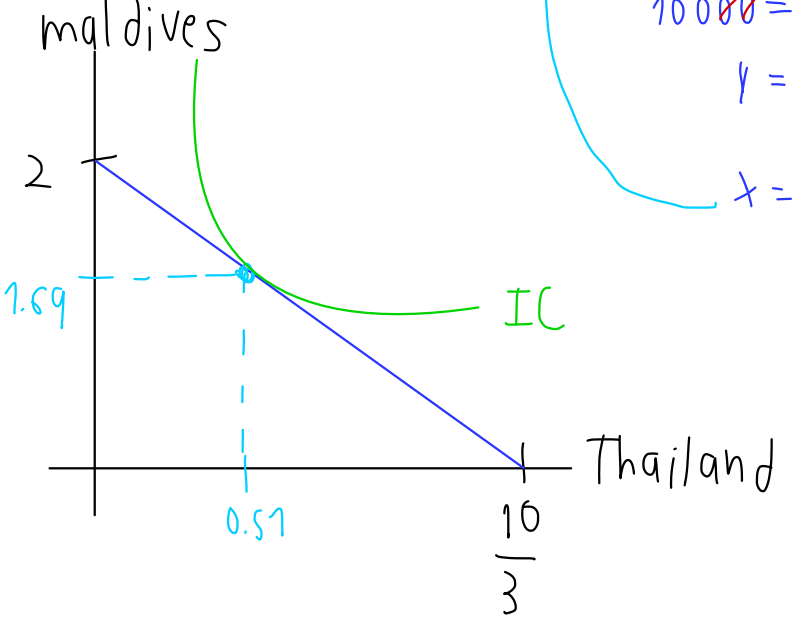
$\frac{2X}{Y} = \frac{3}{5} \rightarrow X = 0.3Y$; $10000 = 3000(0.3Y) + 5000Y$

$10000 = 900Y + 5000Y$

$10000 = 5900Y$

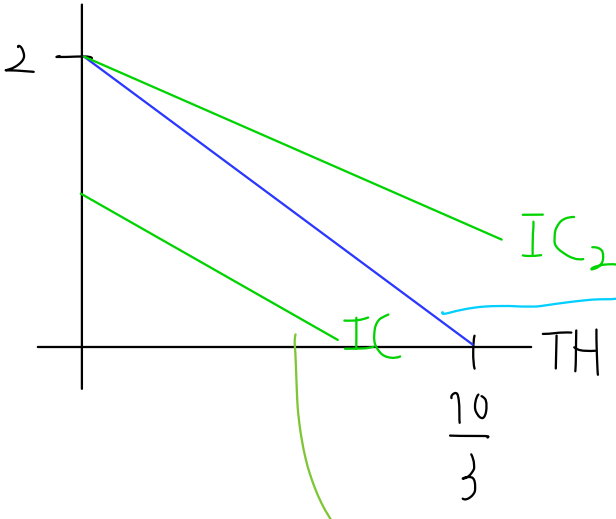
$Y = \frac{100}{59} = 1.69$

$X = 0.3(1.69) = 0.51$



Nattanicha Khoipanich
6304690772 Sec 3

a) MD



$2MU_X = MU_Y$

$\frac{MU_X}{MU_Y} = \frac{1}{2} = 0.5$

$m_{BL} = -0.5$

$10000 = 3000X + 5000Y$

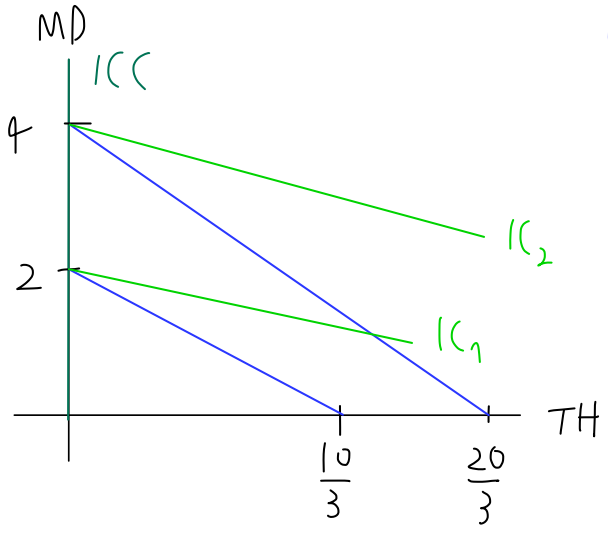
$m_{IC} = -0.6$ $\quad m_{IC} = \frac{3}{5} = 0.6$

Neo will travel to Maldives only for 2 times

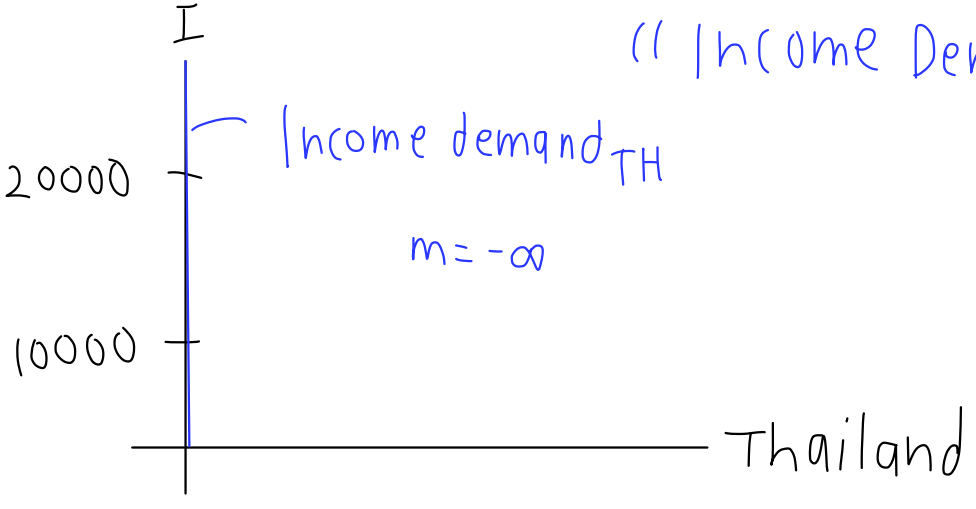
because $\frac{MU_X}{MU_Y} < \frac{P_X}{P_Y}$ means that slope IC > slope BL

∴ Neo should increase travelling to maldives and decrease travelling to Thailand in order to get higher utility. #

b)



"ICC"



"Income Demand"

Income demand$_{TH}$

$m = -\infty$

#

(2) a) $MRTS = -\frac{MP_L}{MP_K}$

$= -\frac{6}{8} = -0.75$ #

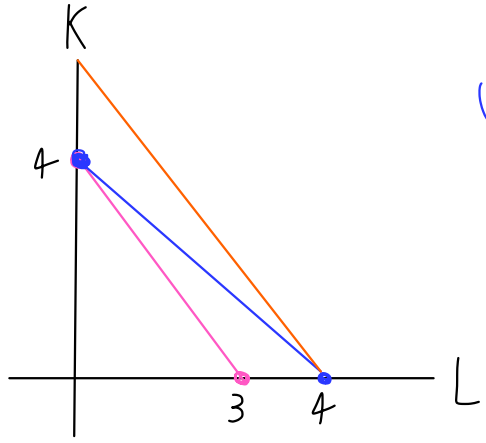
Cost minimization: $\frac{MP_L}{MP_K} = \frac{w}{r}$

$\frac{6}{8} = \frac{3}{r}$

$6r = 24$

$r = 4$ #

b)

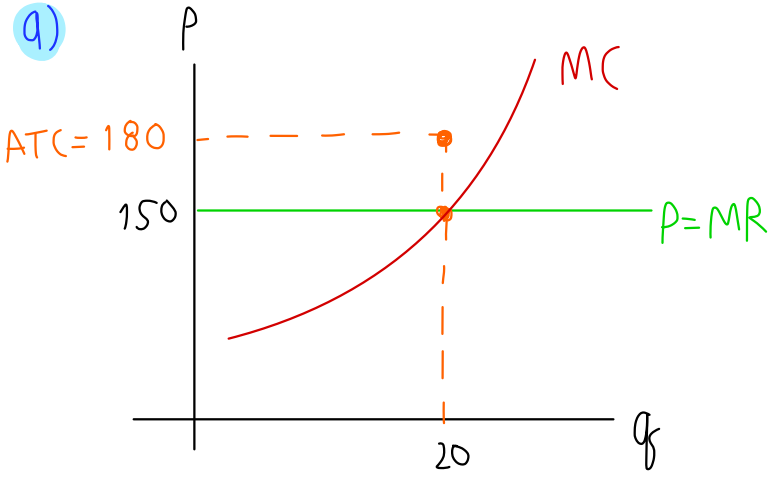


$w = 4, r = 4$;

$m = \frac{w}{r}$

$= \frac{4}{4} = -1$

3) a)



ATC = 180

AFC = 60

b)

$AVC = ATC - AFC$

$= 180 - 60 = 120$ #

$TC = AC \cdot q$

$= (180)(20) = 3600$ #

$TR = P \cdot q$

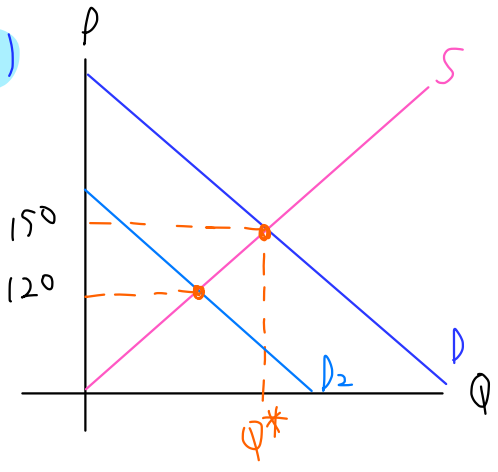
$= (150)(20) = 3{,}000$ #

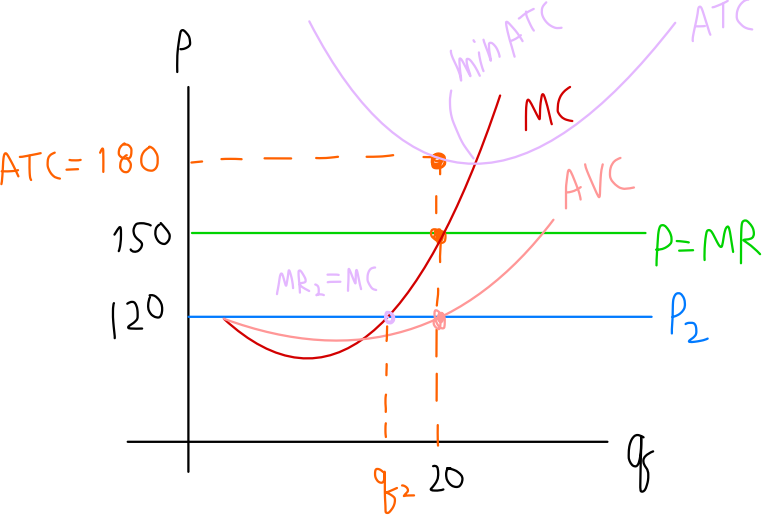
$\pi = TR - TC$

$= 3000 - 3600 = -600$ #

c) Yes, firm should stay in the market in the short-run because $P > AVC$. It means that TR can cover more than variable cost, which means that firm losses only some fixed cost.

d)





1. $D\downarrow \rightarrow P\downarrow$ from 150 to 120
2. $MR_2 = MC = 120 \Rightarrow q_f\downarrow$ from 20 to q_f^2
3. since $p = 120$, $P > AVC$
   so firm still can operate

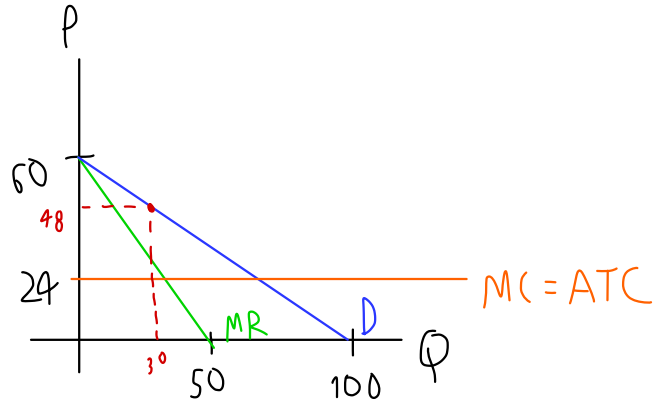
#

4) a) $TR = P \times Q$

$TR = (60 - 0.6Q)Q$

$= 60Q - 0.6Q^2$

$\frac{dTR}{dQ} = MR = 60 - 1.2Q$



b) $MC = MR$

$24 = 60 - 1.2Q$

$1.2Q = 36$

$Q = 30$

$Q = 30$; $P = 60 - 0.6(30)$

$P = 42$

$\pi = TR - TC$

$= P \times Q - ATC \times Q$

$= (P - ATC)Q$

$= (48 - 24)30 = 720$ #

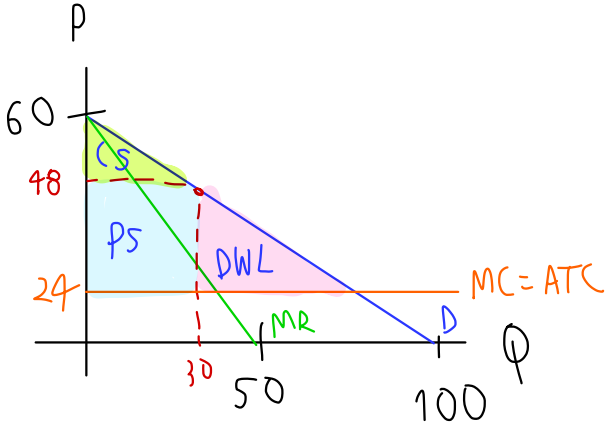
c) $MC = P = 24$;

$24 = 60 - 0.6Q$

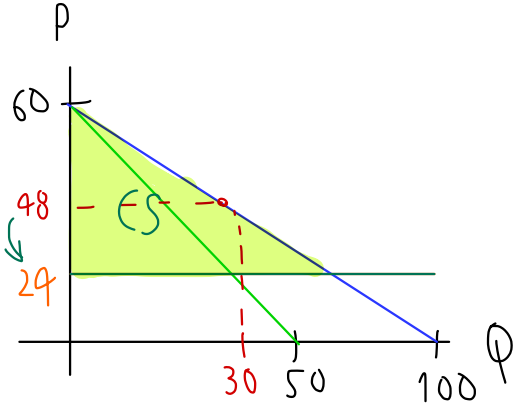
$0.6Q = 36$

$Q = 60$

before



after



5

		Mix		
		Boba tea (B)	Ice-cream (C)	Donut (D)
Mook	Boba tea (B)	**1**, 2	**3**, 5	**2**, 1
	Ice-cream (C)	**0**, 4	**2**, 1	**3**, 0
	Donut (D)	**-1**, 1	**4**, 3	**0**, 2

แนวนอน – เลือกตัวหลัง (mix)
ตั้ง – เลือกตัวหน้า (mook)

mook choose D, mix choose C

mix choose C, mook choose D

∴ nash equilibrium is [D, C]

[4, 3] #