14.1 NE is when players choose their highest Pay off, given the strategy chosen by another player

14.2 prisoner's dilemma is game conflict between self interest and collective interest
chicken is one player will win and one player will lose (2 NE)

14.9
a.) No dominant
b.) ¥ 720 for Asahi and Kirin
c.) ¥ 690 for Asahi and kirin
d.) ¥ 630 is dominat strategy
e.) NE is to choose ¥ 630 for both players

14.15 a.) No dominant strategy
NE = (10, 20), (20, 10)

b.) find BR of SONY

q = Prob that columbia will pick beta

sony will pick beta if

$E(V_{Beta})_{sony} > E(V_{VHS})_{sony}$

$$(q)20 + (1-q)0 > (q)0 + (q-1)10$$

$$20q > 10q - 10$$

$$q > \frac{1}{3}$$

∴ sony will choose Bera if $q > \frac{1}{3}$

find BR for Columbia Picture

p = prob that sony will pick Beta

Columbia will pick Beta if

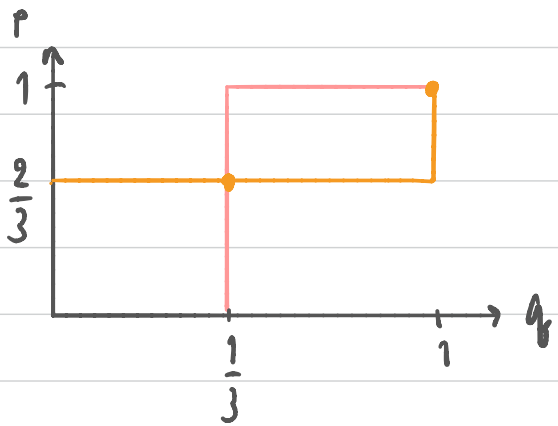
$E(V_{Beta})_{cp} > E(V_{VHS})_{cp}$

$$(p)10 + (1-p)(0) > p(0) + (1-p)20$$

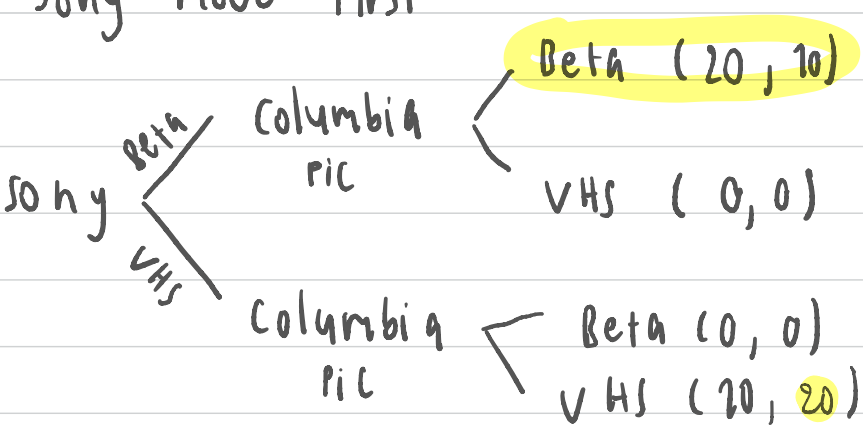
$$10p > 20 - 20p$$

$$p > \frac{2}{3}$$

∴ Columbia will pick beta if $p > \frac{2}{3}$



C.) Sony move first

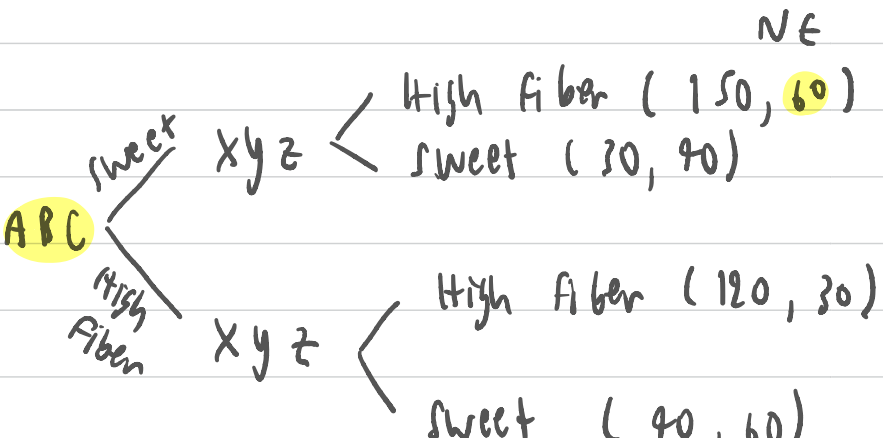


∴ Columbia will choose beta when sony Choose Beta and will choose VHS if sony Choose VHS

14.20 a.) 2 equilibrium

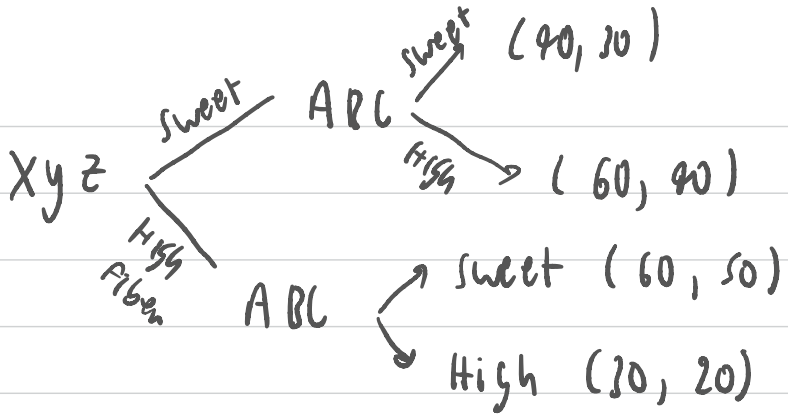
first ABC produce sweet ($\pi = 50$ M) and XYZ produces high fiber ($\pi = 60$M), then ABC produces high fiber ($\pi = 40$ M) and XYZ produces sweet ($\pi = 60$ M)

b.)



So, ABC will produce sweet as it yields higher profit

C.)



In this case there is no first mover advantage because Xyz will gain 60M persons in both case