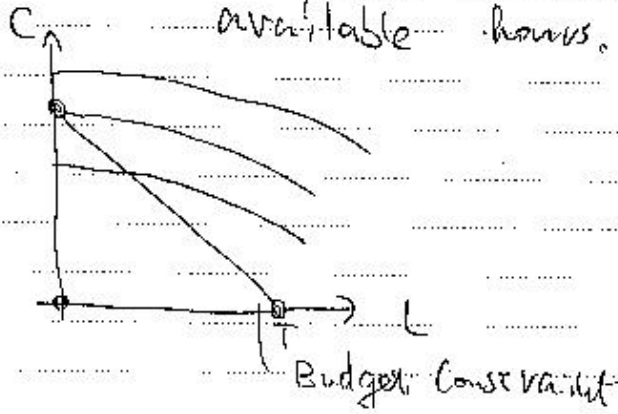


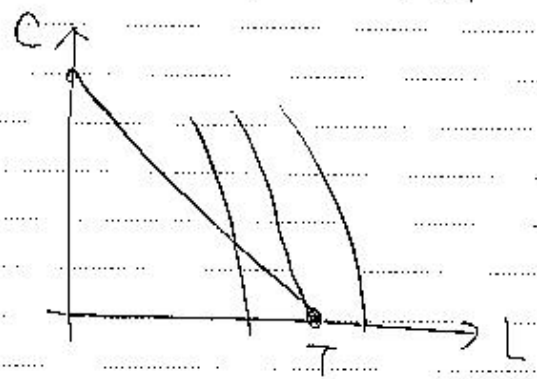
DAIJI KAWAGUCHI

Problem 1 A person allocate either 0 hours or Full available hours.



Case A

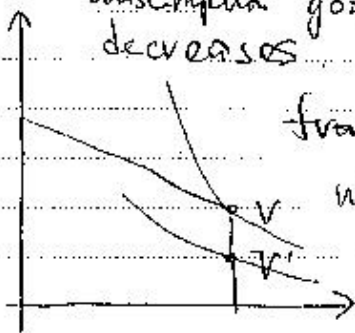
Zero hour is allocated to leisure



Case B

Full hour is allocated to leisure

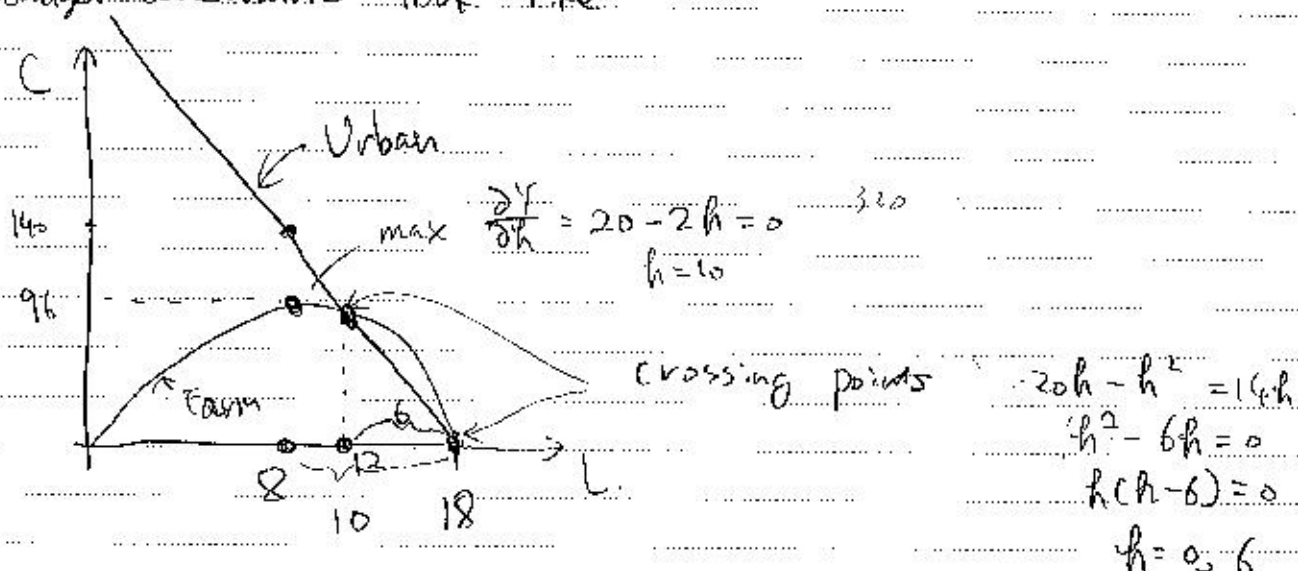
Problem 2 Due to the increase in price level, the amount of consumption goods purchased by non-labor income decreases. Thus non-labor income decreases



from  $V$  to  $V'$ . As a result, reservation wage falls.

### Problem 3

We assume 16 hours are available for a worker that can be allocated to either work or leisure. The budget constraints look like



- a) As seen from the diagram above, if hours at work is less than 6 hours, it is optimal to work on farm. If the hours at work exceeds 6 hours, it is optimal to work in urban area.

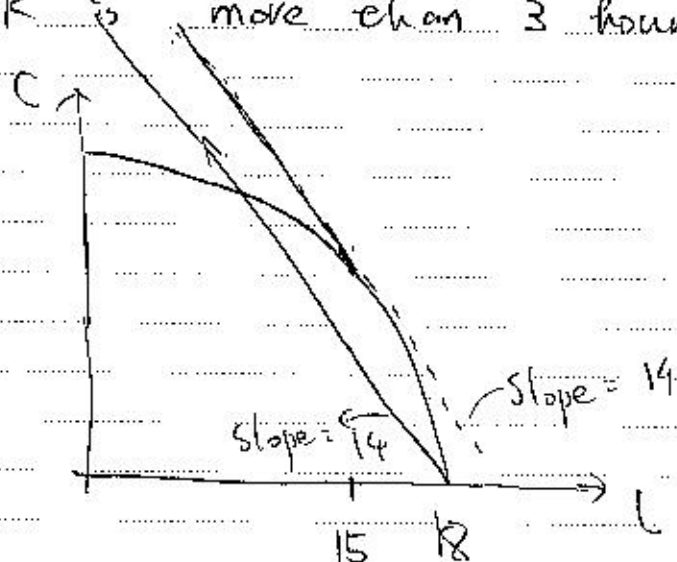
- b) If this worker can combine both Farm and urban work, this worker should work in Farm as far as his marginal product of labor is more than his marginal product of labor in urban sector.

$$\text{This is } \frac{dY_f}{dh} = \frac{dY_u}{dh}.$$

$$20 - 2h = 14$$

$$2h = 6 \quad h = 3$$

This worker should work only in farm if his optimal hours of work is less than 3 hours, while it is optimal to combine urban work and 3 hours of farm work if his optimal hours of work is more than 3 hours.



The budget constraint when farm work and urban work can be combined.

Date: .....

Problem 4

Currently this worker enjoys  $600 \times 70 = \$21000$  utility. To entice this worker to work 60 hours, the combination of 60 hours of work and  $\$x$  of consumption should render higher utility. This is to say

$$x \times 60 > 600 \times 70$$

$$x > 700$$

Thus the income should increase ~~more~~ than 100 dollars