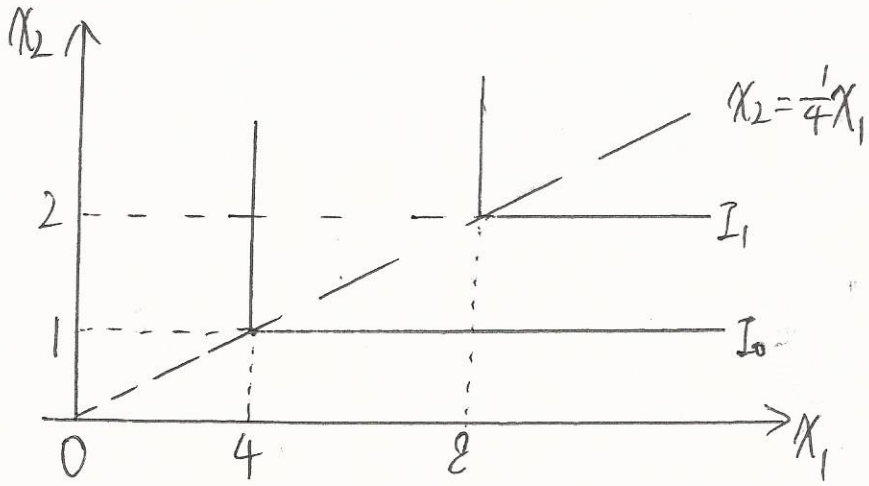
Lab 2_ Answers for ECON-2101-001

MD

1. a)

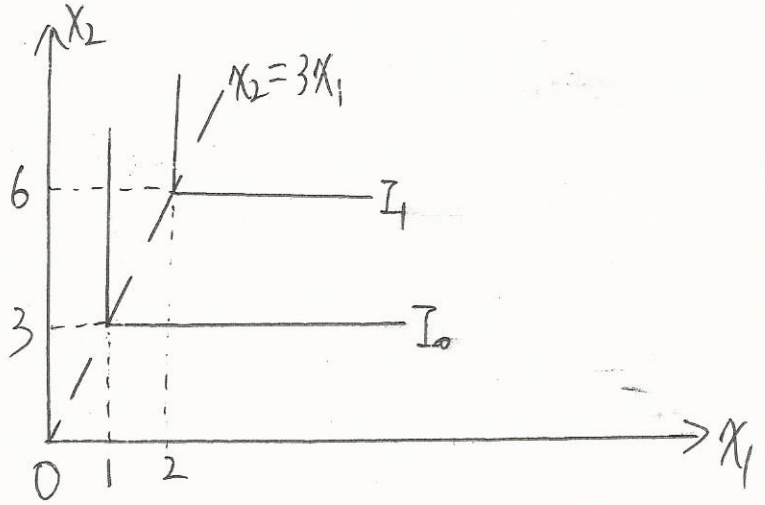


- Perfect Complements
- key words: with
- $4X_1$ with $1X_2$

$\Rightarrow X_2=\frac{1}{4}X_1$

$U=\min\{X_1, 4X_2\}$

b)

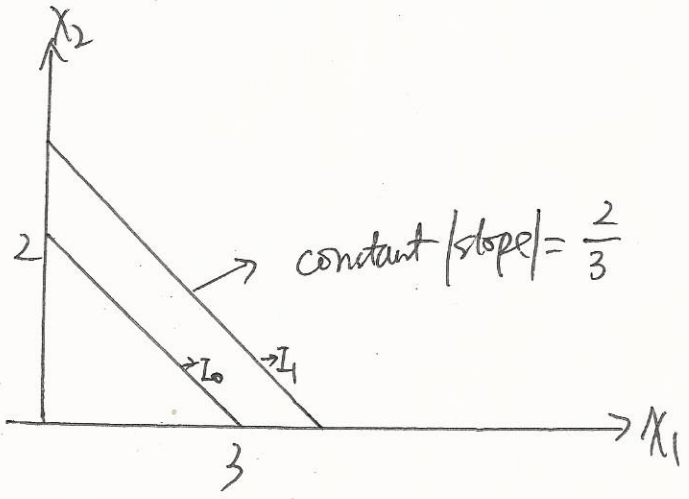


- Perfect Complements
- $1X_1$ with $3X_2$

$\Rightarrow X_2=3X_1$

$U=\min\{3X_1, X_2\}$

c).



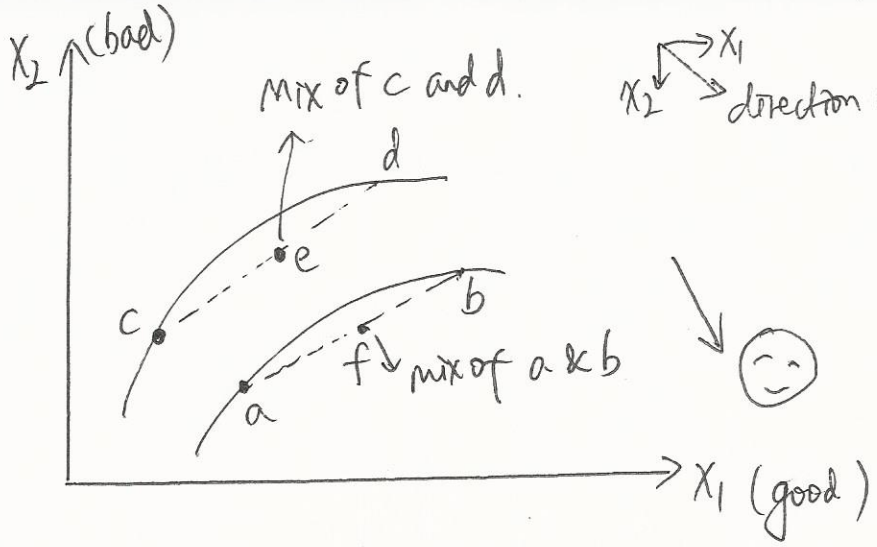
- Perfect Substitutes
- key words:

sacrifice ... for ...

- $3X_1$ for $2X_2$

$\Rightarrow$ constant $|MRS|=\frac{2}{3}$

$U=2X_1+3X_2$

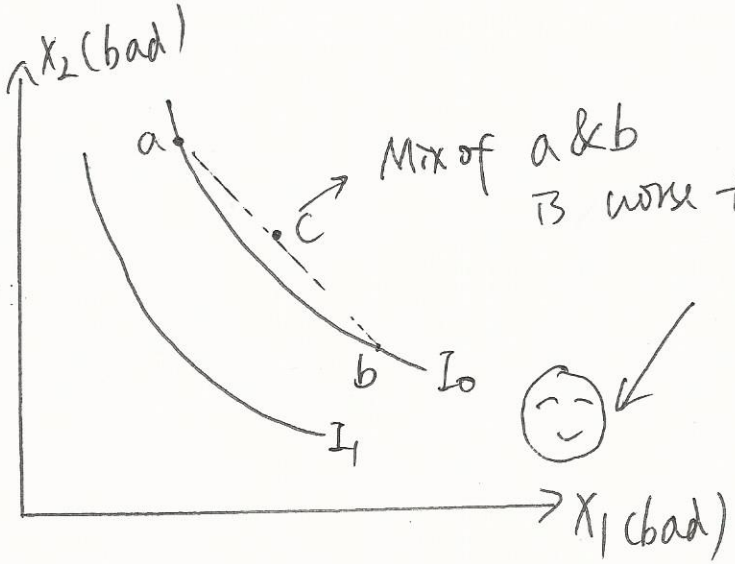
d). 

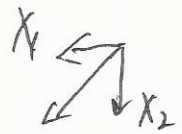
direction of increasing preferences

→ concave preferences

$e > c \sim d$

$f > a \sim b$

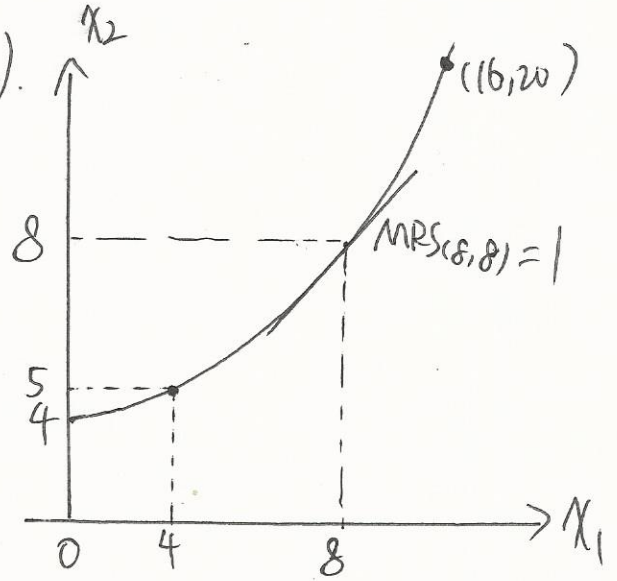
e). 



Mix of a & b is worse than a and b.

→ Convex preferences

$a \sim b > c$

2. a). 

b) $MRS_{(0,4)} = \frac{0}{8} = 0$

$MRS(4,5) = \frac{4}{8} = \frac{1}{2}$

$MRS(8,8) = \frac{8}{8} = 1$

$MRS\{(16,20) = \frac{16}{8} = 2$

↓ increasing

c). 1 X_2 for 1 extra X_1

$\Rightarrow MRS = 1$

$\therefore MRS = \frac{X_1}{8} = 1$

$X_1 = 8$, work 8 days

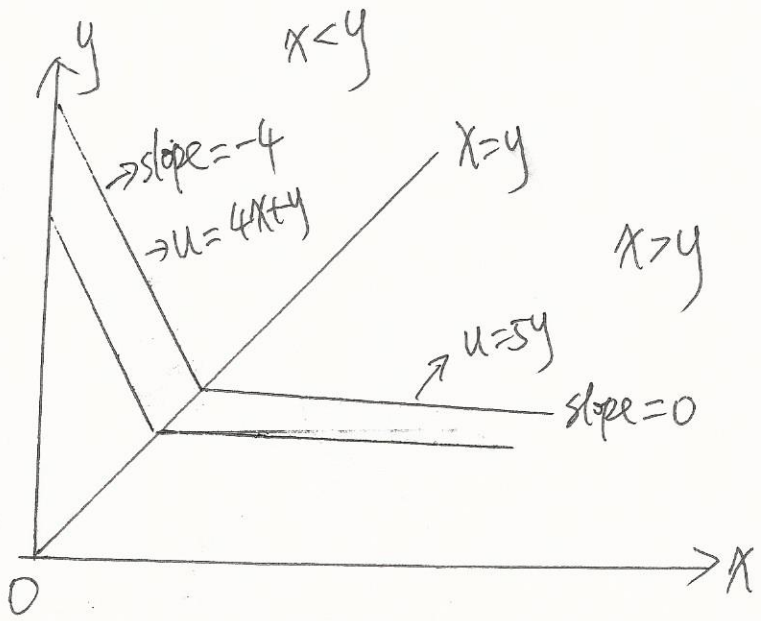
3. B

4. C

5. E.

6. C

$$u = \begin{cases} 4x+y & x \le y \\ 5y & x > y \end{cases}$$



7. D

8. E

$\Rightarrow MRS_{x,y} = \frac{y}{x} = \frac{8}{2} = \frac{4}{1}$

Ike is willing to give up 4 y for 1 extra x.

—The END—