

Chapter 2: 7, 10

Chapter 3: 5, 6, 8

Chapter 2.7

- a. Cigarette consumption would fall by between 4.5% and 6.0%.
- b. Assuming that cigarette price do not change. A 50% increase in income would cause sales of cigarettes to increase 25%. The weighted average of all income elasticities equals 1, so consumption of noncigarette items would increase by more than 50% and certainly more than the 25% percentage of cigarettes.

Chapter 2.10

a. $\frac{\partial Q}{\partial I} \cdot \frac{5000}{1000} = 20$

b. $\frac{\partial Q}{\partial P} \cdot \Delta P + \frac{\partial Q}{\partial I} \cdot \Delta I = 0$

Solving ΔP , we can get $\Delta P = \frac{20}{3} = \6.67 .

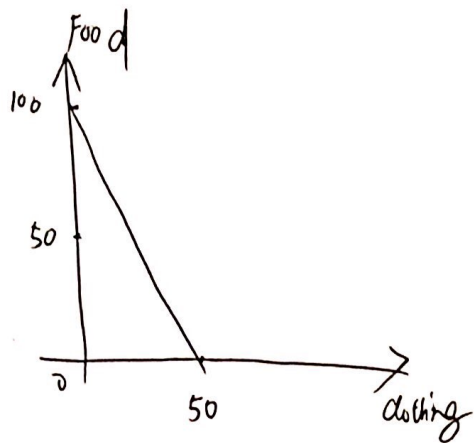
c.

Price elasticity of demand = $\frac{\frac{\Delta Q}{Q}}{\frac{\Delta P}{P}} = \frac{\Delta Q}{\Delta P} \cdot \frac{P}{Q}$

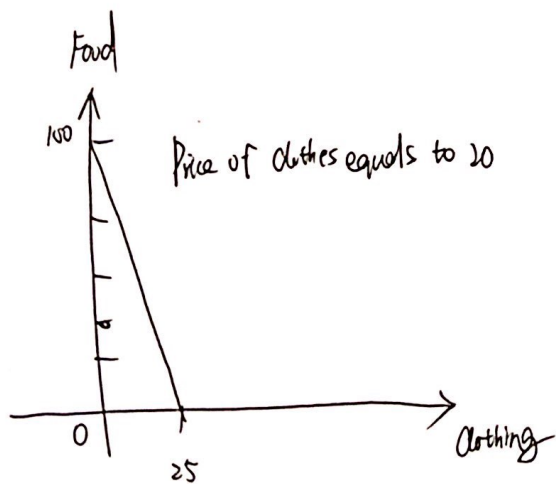
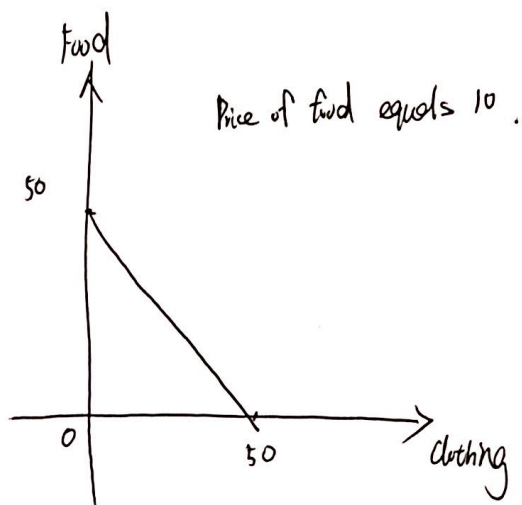
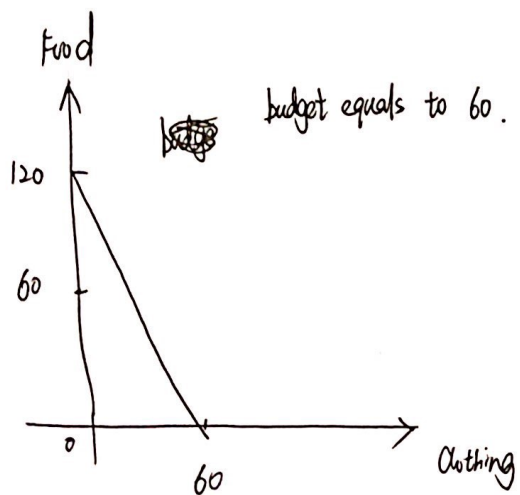
$\frac{\Delta Q}{\Delta P}$ stays constant, $\frac{P}{Q}$ increased \Rightarrow elasticity increased.



Chapter 3.5



Chapter 3.6



Chapter 3.8

a. $\begin{cases} P_X = \$50 \\ I/P_X = 40 \end{cases}$ we have $I = 4000$

b. $100X + \cancel{80Y} 50Y = 4000$

c. slope is $-\frac{P_Y}{P_X} = -\frac{1}{2}$

d. $\frac{4000}{80} = 50$

e. The MRS is equal to the price ratio in equilibrium. So, we have

$$MRS = \frac{P_Y}{P_X} = \frac{50}{100} = 0.5$$

