

$$(a) \quad TC = P(a) \times Q = aQ - bQ^2$$

$$\Rightarrow MC(Q) = a - 2bQ$$

$$\therefore MC = MR$$

$$\Rightarrow c + eQ = a - 2bQ$$

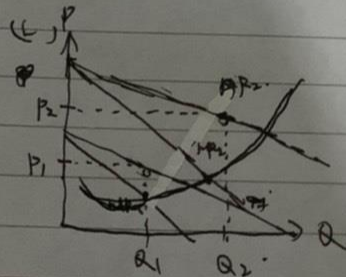
$$(e + 2b)Q = a - c$$

$$Q^* = \frac{a-c}{e+2b} \Rightarrow P^* = a - b \cdot \frac{a-c}{e+2b} = \frac{ae + cL + ab}{e+2b}$$

$$(b) \quad \Rightarrow c \Rightarrow (c+m)$$

$$a \Rightarrow (a-m) \quad m > 0$$

$$\therefore Q_1^* = \frac{a-m-c-m}{e+2b} = \frac{a-c-2m}{e+2b} \therefore Q_1^* < Q^*, \text{ 降价}$$



$$P_2^* > P_1^*$$

\Rightarrow 人增加, P^*
 a 增加

3.

$$TR = P \times Q = 120Q - Q^2 \Rightarrow MR = 120 - 2Q$$

$$TC = 2Q^2 \Rightarrow MC = 4Q$$

$$\Rightarrow MC = MR \Rightarrow Q^* = 20 \Rightarrow P^* = 100$$

$$\pi = TR - TC = 2000 - 800 = 1200$$