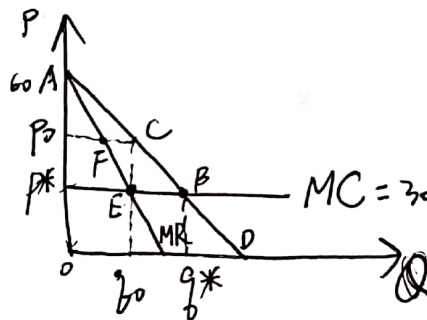


$$T1: P=60-q, TC=30q$$

$$\begin{aligned} (1): P=MC & \quad TR=(P \times Q)=60q-q^2 \\ \Rightarrow 60-q &= 30 \quad \Rightarrow MR=-2q+60 \\ \Rightarrow q^*=30 & \quad \Rightarrow q_0=15 \\ P^*=30 & \quad \Rightarrow P_0=45 \end{aligned}$$

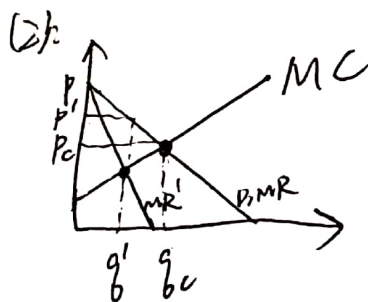


$$\Rightarrow CS = 15 \times (60 - 45) \times \frac{1}{2} = 112.5$$

$$PS = 15 \times 15 = 225$$

$$\text{总利润} = (15 + 30) \times 15 \times \frac{1}{2} = 337.5$$

$$\text{无谓损失} = 15 \times 15 \times \frac{1}{2} = 112.5$$



$$CS=0$$

$$PS = 30 \times 30 \times \frac{1}{2} = 450$$

$$\text{总利润} = 450$$

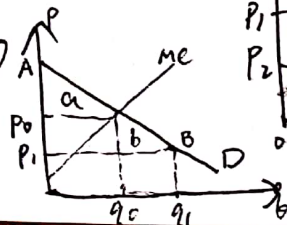
$$\text{无谓} = 0$$

$$(3): CS=0$$

$$PS = (30+60) \times 30 \times \frac{1}{2} = 1350$$

$$\text{总利润} = 1350$$

$$\text{无谓} = 0$$



$$(4):$$

