



② (a) $Q = 100$ is correct

$$Q = \frac{Q_c}{\frac{1}{100}}$$

At this quantity price is $P = a - b \left(\frac{Q_c}{100} \right)^2$
 $P = 100 - 0.01 \times 100^2 = 0$

(b) since $Q = \frac{Q_c}{100}$

(c) $Q \geq 0$ $P = \frac{a - bQ^2}{100}$

③ $MC = 100 - 2Q = 49$ $Q = 20$ $P = 100$
 $TC = 100 \times 20 - 2(20)^2 = 1200$ $FC = 100 - 20 = 80$

$$\text{Profit} = 1200 - 80 = 1120$$

