$$q = \frac{-b \mp \sqrt{b^2 - 4ac}}{2a}$$

$$= \frac{-10 \mp \sqrt{10^2 - 4(1)(-200)}}{2(1)}$$

$$= \frac{-10 \mp \sqrt{900}}{2}$$

$$= \frac{-10 + 30}{2}, \frac{-10 - 30}{2}$$

$$= 10, -20$$

X (negative)

∴ Eq. point (10, 30)

10 A certain product has supply and demand functions $2p - q = 40$ and $pq = 100 + 2q$.

a) If the price \$50, how many are demanded. Is the price likely to increase from \$50 or decreas.

at $p = \$50$

S: $2p - q = 40 \longrightarrow 2(50) - q = 40$

$$100 - q = 40$$
$$-100 \qquad -100$$
$$-q = -60$$

$\boxed{\therefore q = 60}$ quantity ~~demanded~~ supplied

3.8