

$$4 \text{ (a)} \quad \mu = 25 \\ \sigma^2 = 1 \\ \sigma = 1$$

$$\mu = 20 \\ \sigma^2 = 1 \\ \sigma = 1$$

$$Z = \frac{X - \mu}{\sigma}$$

$$P(X > 23) = P(X > \frac{23 - 25}{1}) = P(X > -2) = 0.9772$$

$$P(X > 23) = P(X > \frac{23 - 20}{1}) = P(X > 3) = 0.0013$$

$$(a) \quad P(G | E \cdot P) = \frac{P(G \cap E \cdot P)}{P(E \cdot P)} = \frac{0.0013}{0.9773} = \frac{13}{9773}$$

$$(b) E(x) = \mu = 25$$

$$\sigma_x = \frac{\sigma}{\sqrt{n}} = \frac{1}{\sqrt{80}} = 0.1118$$

$$(c) P(x > 26) = P(x > \frac{26 - 25}{1}) = P(x > 1) = 0$$

$$P(x > 26) = P(x > \frac{26 - 25}{1}) = P(x > 1) = 0.1587$$