

Σ ed. 3, Ex 7.10 p. 145

$$\begin{aligned} 1. \quad a) \quad E(X) &= 30 & E(Y) &= 40 \\ E(X+Y) &= 30 + 40 \\ &= \underline{70} \end{aligned}$$

$$\begin{aligned} b) \quad \text{VAR}(X+Y) &= \text{VAR}(X) + \text{VAR}(Y) \\ &= 5 + 1 \\ &= \underline{6} \end{aligned}$$

$$\begin{aligned} c) \quad E(2X+Y) &= 2E(X) + E(Y) \\ &= 60 + 40 \\ &= \underline{100} \end{aligned}$$

$$\begin{aligned} d) \quad \text{VAR}(2X+Y) &= 2^2 \text{VAR}(X) + \text{VAR}(Y) \\ &= 4(5) + 1 \\ &= \underline{21} \end{aligned}$$