

MSV 14: Sample Mean Gap-filler - Answers

$$X_1 \sim N(14, 12^2), \text{ sample size} = 9$$

$$\bar{X}_1 \sim N(14, 4^2), P(\bar{X}_1 < 15) = \Phi\left(\frac{1}{4}\right) = 0.5987$$

$$X_2 \sim N(11, 10^2), \text{ sample size} = 4$$

$$\bar{X}_2 \sim N(11, 5^2), P(\bar{X}_2 < 13) = \Phi\left(\frac{2}{5}\right) = 0.6554$$

$$X_3 \sim N(6, 8^2), \text{ sample size} = 16$$

$$\bar{X}_3 \sim N(6, 2^2), P(\bar{X}_3 < 7) = \Phi\left(\frac{1}{2}\right) = 0.6915$$