

Solutions

$$X \sim N(40, 3.8)$$

$$P(X < 38) = \underline{0.1525}$$

$$P(X > 39) = \underline{0.6960}$$

$$P(X \leq 41) = \underline{0.6960}$$

$$P(X \geq 43) = \underline{0.0619}$$

$$P(37 < X < 45) = \underline{0.9329}$$

$$X \sim N(27, 2.7)$$

$$P(X < 29) = \underline{0.8882}$$

$$P(X > 25) = \underline{0.8882}$$

$$P(X \leq 22) = \underline{0.0012}$$

$$P(X \geq 30) = \underline{0.0339}$$

$$P(24 < X < 34) = \underline{0.9660}$$

$$X \sim N(13, 1.64^2)$$

$$P(X < 16) = \underline{0.9663}$$

$$P(X > 15) = \underline{0.1113}$$

$$P(X \leq 12) = \underline{0.2710}$$

$$P(X \geq 10) = \underline{0.9663}$$

$$P(11 < X < 17) = \underline{0.8813}$$

$$X \sim N(27.2, 2.06^2)$$

$$P(X < 24) = \underline{0.0602}$$

$$P(X > 30) = \underline{0.0870}$$

$$P(X \leq 27) = \underline{0.4613}$$

$$P(X \geq 26) = \underline{0.7199}$$

$$P(25 < X < 32) = \underline{0.9694}$$

$$X \sim N(3.5, \frac{2.8}{65})$$

$$P(X < 3.2) = \underline{0.0742}$$

$$P(X > 2.9) = \underline{0.9981}$$

$$P(X \leq 3.9) = \underline{0.9730}$$

$$P(X \geq 3.0) = \underline{0.9920}$$

$$P(3.2 < X < 3.9) = \underline{0.8989}$$

$$X \sim N(124, \frac{0.97^2}{15})$$

$$P(X < 123.5) = \underline{0.0229}$$

$$P(X > 124.1) = \underline{0.3448}$$

$$P(X \leq 124.6) = \underline{0.9917}$$

$$P(X \geq 123.1) = \underline{0.9998}$$

$$P(123.2 < X < 124.9) = \underline{0.9991}$$