

8. used statcrunch \rightarrow One sample t summary

$$\begin{aligned}\bar{x} &= 59.2 \\ s &= 14.8 \\ n &= 10\end{aligned}$$

$$\begin{aligned}H_0: \mu &= 67.7 \\ H_a: \mu &< 67.7\end{aligned}$$

$$\begin{aligned}t\text{-stat} &: -2.297 \\ p\text{-value} &: 0.0182\end{aligned}$$

$$\begin{aligned}9. \quad \mu &= 960 \\ \sigma &= 275 \\ n &= 80\end{aligned}$$

used statcrunch \rightarrow normal calculator
 $P(X > 961) = 0.5073$

$$\begin{aligned}s &= \frac{\sigma}{\sqrt{n}} = \frac{275}{\sqrt{80}} = 30.7459 \\ P(\bar{x} > 961) &= 0.5646\end{aligned}$$

$$\begin{aligned}10. \quad \mu &= 48 \\ \sigma &= 13.5 \\ n &= 50 \\ z &= 2\end{aligned}$$

$$48 \pm 2 \cdot \frac{13.5}{\sqrt{50}}$$

$$48 \pm 3.8184 = 44.1816 \quad 51.8184$$

$$\begin{aligned}11. \quad \bar{x} &= 16.5 \\ s &= 2.5 \\ n &= 56\end{aligned}$$

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$$L\text{ Limit} = 15.6995 \quad U\text{ Limit} = 17.3005$$

$$\begin{aligned}12. \quad \mu &= 45 \\ \sigma &= 4.3 \\ n &= 48 \\ z &= 2.576\end{aligned}$$

$$m = 2.576 \cdot \frac{4.3}{\sqrt{48}} = 1.60$$

$$\begin{aligned}13. \quad \mu &= 38 \\ \sigma &= 26.9 \\ n &= 56\end{aligned}$$

$$\begin{aligned}M\bar{x} &= 38 \\ \sigma_{\bar{x}} &= \frac{\sigma}{\sqrt{n}} = \frac{26.9}{\sqrt{56}} = 3.5947\end{aligned}$$

$$\begin{aligned}14. \quad p &= .35 \\ n &= 192\end{aligned}$$

$$\sigma_p = \sqrt{\frac{.35(1-.35)}{192}} = .03442$$

used stat crunch \rightarrow normal calculator

$$P(0.128 \leq x \leq 0.49) = 0.9790$$

$$\begin{aligned}15. \quad P(R) &= 2/13 \\ P(W) &= 9/13 \\ P(Y) &= 2/13\end{aligned}$$