

1)a) Wording says "equal to", not "less" or "more."

b)

$$H_0: \mu = 17$$

$$H_a: \mu \neq 17$$

$$c) t = -4.73$$

$$d) p < 0.1\%$$

e) $p \ll \alpha$. Reject H_0 , accept H_a .

f) We have strong evidence that the average number of chips is not equal to 17 chips.

$$g) p = 0.0000536$$

2)a) Wording says "less than", left-tailed.

b)

$$H_0: \mu = 8$$

$$H_a: \mu < 8$$

$$c) t = -0.540$$

d) Correct sign, should be negative because of the left-tailed test.

$$e) 25\% < p < 50\%$$

f) $p > \alpha$, Fail to reject H_0 , fail to accept H_a

g) We do not have evidence that the average height of all trees is less than 8 feet.

$$h) p = 0.298$$

3)a) We are 90% confident that the average water used by all households in NEIWD on August 11 is between 135.9 and 194.7 gallons.

b) We are 90% confident that the total water used by NEIWD on August 11 is between 1,983,000 and 2,840,000 gallons.