Lesson 11.3 Practice: Testing a Claim about a Mean

School Launch · Statistics · Unit 11: Significance Tests · Worksheet A

Calculator / tables

Name _____ Date _____ Score _____ / 10

Show your work under each problem, one step per line, and check your answer. Word problems: name the unknown, write the equation, solve, and answer in a sentence with units.

1. Test $H_0 : \mu = 76$ vs $H_a : \mu \neq 76$: $n = 30$, $\bar{x} = 77.7$, $s = 5.4$. Find t (two decimals) and the P-value (four decimals). EASY

2. Test $H_0 : \mu = 64$ vs $H_a : \mu \neq 64$: $n = 15$, $\bar{x} = 64.4$, $s = 8.8$. Find t (two decimals) and the P-value (four decimals). EASY

3. Test $H_0 : \mu = 50$ vs $H_a : \mu \neq 50$: $n = 36$, $\bar{x} = 47.5$, $s = 5.6$. Find t (two decimals) and the P-value (four decimals). EASY

4. Test $H_0 : \mu = 36$ vs $H_a : \mu \neq 36$: $n = 32$, $\bar{x} = 37.6$, $s = 5.4$. Find t (two decimals) and the P-value (four decimals). MEDIUM

5. Test $H_0 : \mu = 48$ vs $H_a : \mu \neq 48$: $n = 36$, $\bar{x} = 46.0$, $s = 7.5$. Find t (two decimals) and the P-value (four decimals). MEDIUM

6. Test $H_0 : \mu = 28$ vs $H_a : \mu \neq 28$: $n = 29$, $\bar{x} = 33.8$, $s = 10.4$. Find t (two decimals) and the P-value (four decimals). MEDIUM

7. Test $H_0 : \mu = 32$ vs $H_a : \mu \neq 32$: $n = 20$, $\bar{x} = 31.2$, $s = 10.3$. Find t (two decimals) and the P-value (four decimals). MEDIUM

8. Test $H_0 : \mu = 49$ vs $H_a : \mu \neq 49$: $n = 14$, $\bar{x} = 45.0$, $s = 9.7$. Find t (two decimals) and the P-value (four decimals). HARD

9. Test $H_0 : \mu = 29$ vs $H_a : \mu \neq 29$: $n = 38$, $\bar{x} = 34.3$, $s = 11.3$. Find t (two decimals) and the P-value (four decimals). HARD

10. Test $H_0 : \mu = 76$ vs $H_a : \mu \neq 76$: $n = 36$, $\bar{x} = 77.3$, $s = 10.9$. Find t (two decimals) and the P-value (four decimals). HARD