

- 1) A garbage collector believes that he averages picking up more than four tons of garbage per day. What is the null hypothesis for his statement? 1) _____
 A) $H_0 : \mu \geq 4$ B) $H_0 : \mu \neq 4$ C) $H_0 : \mu < 4$ D) $H_0 : \mu = 4$
- 2) For the conjecture "The average age of students in this class is 22", the null hypothesis is: 2) _____
 A) The average age of students in this class is 22.
 B) The average age of students in this class is not 22.
- 3) For the conjecture "The average weight of a cuckoo bird is less than 2.2 pounds", the null and alternative hypotheses are: 3) _____
 A) H_0 : The average weight of a cuckoo bird is less than 2.2 pounds.
 H_1 : The average weight of a cuckoo bird is more than or equal to 2.2 pounds.
 B) H_0 : The average weight of a cuckoo bird is equal to 2.2 pounds.
 H_1 : The average weight of a cuckoo bird is less than 2.2 pounds.
- 4) A new organic pest control formula is being tested on potato plants to see whether it can reduce the level of potato beetle infestation. The mean number of beetles per untreated plant is 12. It is hoped that the new formula may reduce this infestation rate. State the appropriate null and alternate hypotheses. 4) _____
 A) $H_0 : \mu = 12, H_1 : \mu \neq 12$ B) $H_0 : \mu = 12, H_1 : \mu < 12$
- 5) A sample of 95 chewable vitamin tablets have a sample mean of 288 milligrams of vitamin C. Nutritionists want to perform a hypothesis test to determine how strong the evidence is that the mean mass of vitamin C per tablet exceeds 291 milligrams. State the appropriate null and alternate hypotheses. 5) _____
 A) $H_0 : \mu = 291, H_1 : \mu > 291$ B) $H_0 : \mu = 291, H_1 : \mu \neq 291$
 C) $H_0 : \mu < 288, H_1 : \mu > 288$ D) $H_0 : \mu > 288, H_1 : \mu = 288$
- 6) For the conjecture "The average rent of an apartment is more than \$950 per month," the alternative hypothesis is: 6) _____
 A) The average rent of an apartment is less than or equal to \$950 per month.
 B) We reject the hypothesis that the average rent of an apartment is more than \$950 per month.
 C) We accept the hypothesis that the average rent of an apartment is more than \$950 per month.
 D) The average rent of an apartment is greater than \$950 per month.

Answer Key

Testname: INTRO_HYPOTHESIS_TESTING

- 1) D
- 2) A
- 3) B
- 4) B
- 5) A
- 6) D