

Old Test 3 (November 21, 2006)

Answers

1. b
2. d
3. b
4. b
5.
 - a) yellow-normal = 56.25, yellow-short = 18.75, ebony-normal = 18.75, ebony-short = 6.25.
 - b) H_0 : The body and wing traits are distributed according to the model.
 H_a : The body and wing traits are not distributed according to the model.
 $\chi^2 = 5.671$, P -value = 0.12876
 - c) We cannot conclude that the body and wing traits are not distributed according to the model.
6. -0.0401 to 0.39012
7. $H_0: \mu = 72$. $H_a: \mu \neq 72$.
 $t = 1.57$, P -value = 0.1268.
We cannot conclude the mean heart rate is different than 72 beats per minute.
8. $H_0: p = 0.5$. $H_a: p > 0.5$.
 $t = 1.85$, P -value = 0.032.
We can conclude that a majority of Hope Freshmen women have at least one credit card.
9. $H_0: \mu_i = \mu_d$. $H_a: \mu_i < \mu_d$.
 $t = -6.74$, P -value = 3.68×10^{-8} .
We can conclude that ordering inside is faster, on average, than the drive thru.
10. -1.388 to 8.3885
11. $H_0: \mu = 0$. $H_a: \mu > 0$.
 $t = 3.5$, P -value = 0.003.
We can conclude that Hope males, on average, say they are taller than they actually are.
12. False