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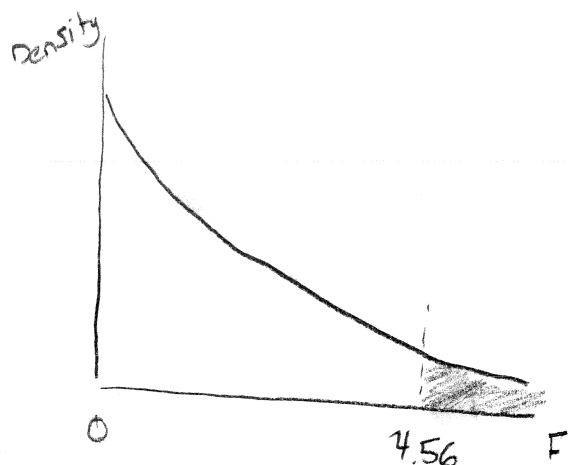
Homework 3 Key

1) Yes - it appears that non-athletes score slightly higher and football players score slightly lower on average

2) $H_0: \tau_1 = \tau_2 = \tau_3 = 0$

H_A : at least one τ_j is not equal to zero

3) $y_{ij} = \alpha + \tau_j + \varepsilon_{ij} \quad j=1,2,3$
 $i=1,2,\dots,n_j$



5) The evidence suggests that the true mean ACT score for at least one type of student is different than the others.

6) Insect Spray was randomly assigned so we can say that spray causes the differences in number of insects. Plots were not randomly selected so these results only apply to the plots that we used.

2pts

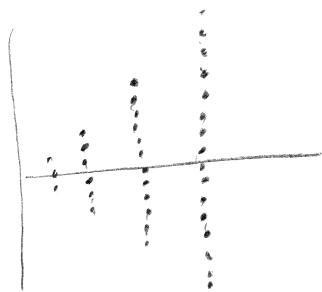
7) Type of student cannot be randomly assigned so we cannot say that differences in ACT score are caused by participating in sports. We are not told whether students are randomly selected so we cannot infer these results to all students.

1pt

8) Parametric

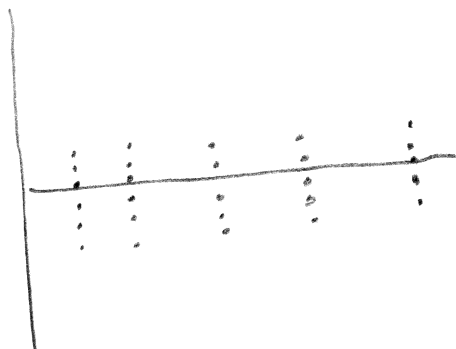
1pt

9)



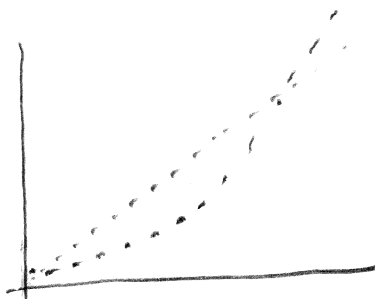
1pt

10)



1pt

11)



1pt

12)

