

Campus Life Hypothesis Testing

- a) A university is evaluating whether freshmen are studying more than the historical average of 12 hours per week. A random sample of 50 freshmen shows an average of 14.5 hours with a standard deviation of 5 hours. Is there evidence that freshmen now study more than 12 hours per week? Perform a hypothesis test!

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- b) The school newspaper says that 40% of students prefer online textbook access over printed books. A random sample of 150 students shows that 51 prefer online access. Is there evidence that the true proportion is less than 40%?

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- c) The campus dining service claims that the average student spends \$85 per week on meals. A sample of 32 students shows an average of \$89 with a standard deviation of \$18. Is there evidence students are spending more than claimed? Perform a hypothesis test!

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Hypothesis Testing - Means

- d) A campus gym advertises that students spend an average of 45 minutes per visit.
A sample of 20 students shows an average of 38 minutes with a standard deviation of 12 minutes.
Is there evidence that students are spending less time than advertised? Perform a hypothesis test!

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