

True/False - No explanation needed. (1pt for correct, 0pt - no answer, -1pt - incorrect)

1. A Type I error involves concluding that two samples came from the same population when they actually came from different populations. True/False
2. If you compute a negative value of the independent-samples t statistic, you know youve made a mistake. True/False

Problems - Need justification. No justification means **zero**!

1. (10pts) We roll two 4-sided dice 100 times and record the outcomes for the sum of the dice: 10 2's, 15 3's, 15 4's, 20 5's, 20 6's, 10 7's and 10 8's.
 - (a) Calculate the expected frequencies, given the null hypothesis H_0 that both dice are fair.
 - (b) Take the significance level $\alpha = 0.1$, perform the χ^2 test and draw a conclusion.