

Math 153 - Quiz 7

March 30, 2017

Name _____

Score _____

Show all work to receive full credit. Supply explanations when necessary. YOU MUST WORK INDIVIDUALLY.

1. (10 points) A recent Gallup poll indicates that 35% of Americans approve of Donald Trump's job as U.S. president. A random sample of 45 Americans is obtained. Let x represent the number of people in the sample who approve the president's job.
 - (a) What are the possible values of x ?
 - (b) The people in the sample are selected without replacement. Technically the trials are not independent. Nevertheless, we can accurately "pretend" the trials are independent. Why?
 - (c) What is the probability that exactly 10 people in the sample approve of the president's job?
 - (d) What is the probability that 12 or fewer people approve of the president?
 - (e) What is the probability that at least 20 people approve of the president?
 - (f) Compute the mean value of x .
 - (g) Compute the standard deviation in x .
 - (h) In the sample of 45 people, what would be an unusually large number of people who approve of the president?