Circle True or False or leave blank. (1 point for correct answer, -1 for incorrect answer, 0 if left blank)

1. True   False   If x is in the rejection region, then the p value for x is less than α.

2. True   False   If H_0 is that there is no wolf, then the boy who cried wolf made a type 2 error.

Show your work and justify your answers. Please circle or box your final answer.

3. (10 points)   (a) (4 points) The media says that 50% of the public think that Giannis should be the NBA MVP. To test their claim, you ask 9 people who they think should win and 8 of them want Giannis to win. If your alternative hypothesis is that more than half like Giannis, without using CLT, explicitly compute the p value for this hypothesis test. You may leave your answer as a fraction.

   (b) (6 points) Now suppose that you ask 100 people and 60 of them want Giannis to win. Use a two-sided alternative hypothesis with $\alpha = 0.05$. Can you reject the media's claim? (Hint: $z(2) = 0.4773$)