Name:

Quiz 9, Attempt 1

200 people were assessed for Race and the presence of a certain characteristic. The following data were collected.

	Present	Absent	Total
Race 1	10 $\left(\frac{50}{4}\right)$	40 $^3\left(\frac{50}{4}\right)$	50
Race 2	50 (50)	50 (50)	100
Race 3	30 (25)	20 (25)	50

Test the null hypothesis that the proportion of people with the characteristic present is 0.25 for Race 1 and 0.50 for Races 2 and 3. Express your answer as a p-value in terms of a known distribution. Be sure to write down the outcome of the test statistic, but you don't need to simplify it.

$$t = \frac{\left(10 - \frac{50}{4}\right)^2}{\frac{50}{4}} + \frac{\left(40 - \frac{3(50)}{4}\right)^2}{\frac{3(50)}{4}} + \frac{5^2}{25} + \frac{5^2}{25}$$

$$\text{P-value} = P\left(\chi^2(3) \geq t\right)$$

Quiz 7, Attempt 2

Suppose a population has a BER(p) distribution. What is the p-value based on the uniformly most powerful test of H_0: p = ¾ against the alternative that p ≠ 3/4? State what the test statistic is and report your answer in terms of the test statistic OR state that no uniformly most powerful test exists.

No UMP test exists.