**7D Two-Tailed Tests**

1. A single observation, $x$, is taken from a Binomial distribution $B\left(10,p\right)$, and a value of 1 is obtained. Use this observation to test $H\_{0}:p=0.45$ against $H\_{1}:p\ne 0.45$ using a 5% significance level.
2. Over a long period of time it has been found that in Enrico’s restaurant the ratio of non-vegetarian to vegetarian meals sold is 2:1. In Manuel’s restaurant, in a random sample of 12 people ordering meals, 2 ordered a vegetarian meal. Using a 5% significance level, test whether or not the proportion of people eating vegetarian meals in Manuel’s restaurant is different to that in Enrico’s restaurant.