3.
(a)

Count of give_status	Column Labels		
Row Labels	**Control**	**Treatment**	**Grand Total**
Did not give	16389	32660	49049
Gave	298	736	1034
Grand Total	**16687**	**33396**	**50083**

	Control	Treatment
Response Rate	0.017858213	0.022039

(b)
Our estimated coefficient for the control group is 0.017858213, and its standard error is 0.00102522. Its standard error represents one standard deviation of the estimated coefficient, under the normal distribution. Thus, there is 98% chance that the true, unknown population coefficient lies within the 0.0158 and 0.0198 interval.

7. (b)

Count of group	Column Labels			
Row Labels	**0**	**1**	**(blank)**	**Grand Total**
Control	**6648**	**10029**	**10**	**16687**
Did not give	6551	9828	10	16389
Gave	97	201		298
Treatment	**13594**	**19777**	**25**	**33396**
Did not give	13276	19360	24	32660
Gave	318	417	1	736
Grand Total	**20242**	**29806**	**35**	**50083**

Blue State	Control	Treatment
Response Rate	0.020041879	0.021085099

Summary

The article studies the effect of a matching grant on charitable giving. The two authors conducted natural experiments to test the hypothesis, in which a total of 50,083 people was randomly assigned to a control and treatment group. 16,687 people in the control group did not receive any matching grant in their donation invitation letters, while 33,396 people in the treatment group did receive a matching grant with a match ratio (i.e. 1:1, 2:1, 3:1) which varied among the people within the treatment group. The study reported statistically significant results on the difference between the control and treatment groups' response rates, while red states reporting higher response rates than those of blue states in the treatment groups. However, no statistically significant results were reported on the differences among the response rates from various match ratios. Thus, the article concludes that a presence of a matching grant does have a positive effect on the response rates, while varying match ratios does not. I disagree with the authors' conclusion. For instance, from my replication result for the difference in response rates between the treatment and control groups, the 95% confident interval shows only .16% to .67% difference among the two, which is not a remarkable difference. On the other hand, such difference while controlling for red and blue states also reports non-remarkable differences, i.e. -0.34% to .55% for blue states and .55% to 1.20% for red states using the 99% confidence interval.