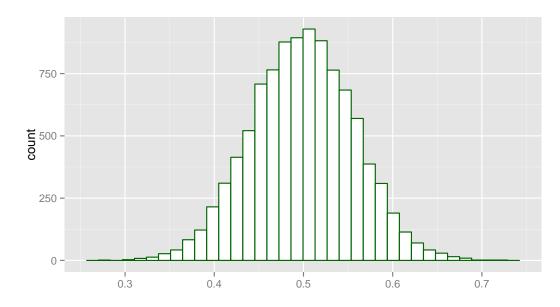
Millennials and Marriage In the national debate on same-sex marriage, it is commonly stated that half of all americans favor same-sex marriage. In 2014, Pew research conducted a poll of millennials (americans born after 1980) and found that 66% answered yes when asked: "Do you favor same-sex marriage?" The poll was a random sample of 75 millennials. Does this poll provide convincing evidence that the opinion of millennials is different from those of americans at large?

- 1. Explain how you could use cards, a coin, or a die to simulate the above statement.
- 2. Write out the *null hypothesis* and the *alternative hypothesis* that are being evaluated, using proper notation.
- 3. What was the value of the observed test statistic?
- 4. In the null distribution below (with 10k simulations), label the axes, indicate with a vertical line the location of the observed test statistic, and shade the area under the curve corresponding to the (two-tailed) p-value.



- 5. Using  $\alpha = .05$ , what is your decision regarding the viability of the null hypothesis?
- 6. Write *one* sentence to President Kroger summarizing what you've learned about the millennials and opinions on same-sex marriage.