

Work in groups of at most three. At least one member of the group must have a Facebook account.

Person to whom graded activity will be returned: \_\_\_\_\_

Others: \_\_\_\_\_

1. Guess the shape of the distribution that describes the number of Facebook friends that Facebook users have.
2. Take a wild guess at the average number of friends Facebook users have.
3. Google “average number of friends on Facebook”. How many friends does Facebook claim the average users has?
4. Is Facebook’s claim much different from your guess? Explain.



9. Is the average number of Facebook friends for your sample close to your initial guess? Is it close to the average claimed by Facebook? Explain.
10. Compute the test statistic  $\frac{\bar{x}-\mu_0}{s/\sqrt{n}}$  and the  $p$ -value.
11. Are your results statistically significant? Are they practically significant? Explain.
12. Should you write to Facebook and tell them the average is higher, lower, or different? Explain.
13. Finally, revisit the assumptions necessary to run the test. Are they really validated? Explain.