

TEST YOUR KNOWLEDGE: Two Sample t Test

1. A researcher is interested in comparing the wages of men and women doing the same type of job at a large company. The data is below:

Men: average wage (per hour) = \$18.95; standard deviation = \$4.44; $n = 18$

Women: average wage (per hour) = \$15.09; standard deviation = \$3.38; $n = 13$

Test whether the difference between the means of the two groups is significant at an alpha (significance level) of .05.

(a) What are the null and alternate hypotheses?

(b) Draw the picture of the distribution of the test statistic (under H_0). Include critical value(s) and region(s) of rejection.

(c) What is the calculated (computed) value of the test statistic?

(d) What is your conclusion?