FRIDAY, FEBRUARY 22, 2019

$$H_0 : P_o = P_s$$
$$H_A : P_o \neq P_s$$

Warm-up

- Write the null and alternate hypothesis for the following:

  - A random sample of $n_o = 153$ people ages 16 to 19 was taken from the island of Oahu, Hawaii, and 12 were found to be high school dropouts. Another random sample of $n_s = 128$ people ages 16 to 19 was taken from Sweetwater County, Wyoming, and 7 were found to be high school dropouts. Do these data indicate that the population proportion of high school dropouts on Oaho (p_o) is different (either way) from that of Sweetwater County (p_s)?

  $$H_0 : P_c = P_m$$
  $$H_A : P_c < P_m \qquad P_m > P_c$$

  - A research group asked voters "would you favor spending more federal tax money on the arts?" Of a random sample of $n_c = 93$ politically conservative voters, $r_c = 21$ responded yes. Another random sample of $n_m = 83$ politically moderate voters showed that $r_m = 22$ responded yes. Does this information indicate that the population proportion of conservative voters (p_c) inclined to spend more federal tax money on funding the arts is less than the proportion of moderate voters (p_m) so inclined?

Tic Tac Lab

$H_0: P_y = P_f$

$H_A: P_y \neq P_f$

TIC TAC LAB

6 squares "toe-to-toe" steps "away"

yourself → up in the air

7 y
1 y
2 y
4 y

Everyone has tried to catch a piece of candy in his/her mouth after tossing it in the air. However, does it make a difference if you throw it in the air, or a friend throws it at you?

You will be collecting 2 sets of data. One will consist of 10 trials where you will throw the candy yourself (we will call this Data set Y). The other set will consist of 10 trials where your friend will throw the candy to you (Data set F). Remember, throw the Tic-Tacs NICELY!!

To avoid bias due to "learning," you should not all throw candy to yourself first. How could you reduce the possibility of this bias? What other issues do we need to resolve for a good experiment?

population

Proportion of all tic-tacs caught by self

proportion of all tic-tacs caught from a friend

What is the parameter of interest?

What are the null and alternative hypotheses?

Record the number that you catch with each method. We will build proportions.

WHAT TO DO WITH THE DATA?

Complete the hypothesis test.

Create a confidence interval.

HOMEWORK

Read Chapter 22

- Take notes on CONDITIONS and FORMULAS
- But, don't go swimming ☺