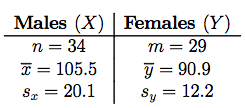
**Exact Test for Difference of Two Means**

1. A psychologist was interested in exploring whether or not male and female college students have different driving behaviors. There were a number of ways that she could quantify driving behaviors. She opted to focus on the fastest speed ever driven by an individual. Therefore, the particular statistical question she framed was as follows:

Is the mean fastest speed driven by male college students different than the mean fastest speed driven by female college students?

She conducted a survey of a random n = 34 male college students and a random m = 29 female college students. Here is a descriptive summary of the results of her survey:



Carry out the test

1. when population sd viz. σx = 19 and σy = 13
2. when population s.d.s are unknown.

1. An experiment is conducted to determine whether intensive tutoring (covering a great deal of material in a fixed amount of time) is more effective than paced tutoring (covering less material in the same amount of time). Two randomly chosen groups are tutored separately and then administered proficiency tests. Their mean marks and s.d.s are given in the following table. Test whether intensive tutoring is better than paced tutoring.

|  |  |  |  |
| --- | --- | --- | --- |
| Method | Sample size | Sample mean | Sample s.d. |
| Intensive | 12 | 46.31 | 6.44 |
| Paced | 10 | 42.79 | 7.52 |