**Testcase 1-**

[1] "The two-proportion test could not be run because the value of CSK was not equal to K, meaning our data is not a count of successes and failures"

[1] "The F test could not be run because the CSK value is not 'S', meaning our data is not spread"

[1] "We cannot perform the pooled two-sample t test or the two-sample t test because our data is not independent"

[1] "Since our data is paired, Depended and our signTNormal, which was generated from the shapiro test is greater than 0.05 we can use the paired t test"

[1] "Fail to reject Ho: p=0.0338180005474067"

**Testcase 1 explanation-**

**Testcase 2-**

[1] "The two-proportion test could not be run because the value of CSK was not equal to K, meaning our data is not a count of successes and failures"

[1] "The F test could not be run because the CSK value is not 'S', meaning our data is not spread"

[1] "We cannot perform the pooled two sample t test because our variance is not approximately equal"

[1] "We can perform the two-sample t test because even though our variance is not approximately equal, our data is approximately normal"

[1] "Fail to reject Ho: p=0.0353113865351224"

**Testcase 2 explanation-**

**Testcase 3-**

[1] "We can use the two-proportion test because our CSK value is equal to K, meaning our data is a count of successes and failures, and our count of x values and y values are both greater than 10"

[1] "Fail to reject Ho: p=0.0255426472387277"

[1] "The F test could not be run because the CSK value is not 'S', meaning our data is not spread"

[1] "None of the tests, pooled two sample test, two sample t test, paired t or sign test could be run because CSK was not equal to C"

**Testcase 3 explanation-**

**Testcase 4-**

[1] "We can use the two-proportion test because our CSK value is equal to K, meaning our data is a count of successes and failures, and our count of x values and y values are both greater than 10"

[1] "Reject Ho: p=6.1366136494519e-16"

[1] "The F test could not be run because the CSK value is not 'S', meaning our data is not spread"

[1] "None of the tests, pooled two sample test, two sample t test, paired t or sign test could be run because CSK was not equal to C"

**Testcase 4 explanation-**

**Testcase 5-**

[1] "The two-proportion test could not be run because the value of CSK was not equal to K, meaning our data is not a count of successes and failures"

[1] "The F test could not be run because the x and y values are not normal"

[1] "None of the tests, pooled two sample test, two sample t test, paired t or sign test could be run because CSK was not equal to C"

**Testcase 5 explanation –**

**Testcase 6-**

[1] "The two-proportion test could not be run because the value of CSK was not equal to K, meaning our data is not a count of successes and failures"

[1] "Fail to reject Ho: p=0.16916152795188"

[1] "None of the tests, pooled two sample test, two sample t test, paired t or sign test could be run because CSK was not equal to C"

**Testcase 6 explanation -**

**Testcase 7-**

[1] "The two-proportion test could not be run because the value of CSK was not equal to K, meaning our data is not a count of successes and failures"

[1] "The F test could not be run because the CSK value is not 'S', meaning our data is not spread"

[1] "We can perform the pooled two sample t test because we have approximately equal variance and our data is approximately normal"

[1] "Reject Ho: p=9.99661974757338e-09"

**Testcase 7 explanation-**

**Testcase 8-**

[1] "The two-proportion test could not be run because the value of CSK was not equal to K, meaning our data is not a count of successes and failures"

[1] "The F test could not be run because the CSK value is not 'S', meaning our data is not spread"

[1] "We cannot perform the pooled two-sample t test or the two-sample t test because our data is not independent"

[1] "We cannot use the paired t test because our signTNormal, gathered from the shapiro test, is less than 0.05"

[1] "Since our data is dependent and the size of x and y are equal we can use the Sign test"

**[1] "sign"**

**Testcase 8 explanation-**

**Testcase 9-**

[1] "The two-proportion test could not be run because the value of CSK was not equal to K, meaning our data is not a count of successes and failures"

[1] "The F test could not be run because the CSK value is not 'S', meaning our data is not spread"

[1] "We can perform the pooled two sample t test because we have approximately equal variance and our data is approximately normal"

[1] "Reject Ho: p=1.06343053095174e-09"

**Testcase 9 explanation-**

**Testcase 10-**

[1] "The two-proportion test could not be run because the value of CSK was not equal to K, meaning our data is not a count of successes and failures"

[1] "The F test could not be run because the CSK value is not 'S', meaning our data is not spread"

[1] "We cannot perform the pooled two-sample t test or the two-sample t test because our data is not independent"

[1] "Since our data is paired, Depended and our signTNormal, which was generated from the shapiro test is greater than 0.05 we can use the paired t test"

[1] "Reject Ho: p=0.000122458162608136"

**Testcase 10 explanation-**