The space data, based on the histogram, looks unlikely to be normal, but this is a small set. The lab data is slightly skewed right but again a small data set. Must be a comment from both Normality best indicated with normal prob. plots & more investigation. Doesn't matter what it says.

Since $\theta$ is unknown, it can be assumed that we have normally distributed data. We need to use a $t$-stat. to compute our CI. $t_{0.025,13} = 2.160$ $\bar{x} \pm E \Rightarrow 7.881 \pm 0.587$ $z = 1.96 \Rightarrow E = 0.587$ $\Rightarrow 7.308 < \mu < 8.464$

$\chi^2$ test: $\chi^2 = 13.1054 = 13.1054$ Fail to reject.

$H_0: \mu = 8.5$ $H_a: \mu \neq 8.5$ $t = \frac{8.43 - 8.5}{0.26} = -2.92$ $t_{0.025,13} = -2.160$ Reject null & accept alternative.

$H_0: \sigma \leq 1$ $H_a: \sigma > 1$ $\chi^2 = 13.1054 > 12.1$ $\Rightarrow \chi^2$ test. Fail to reject.

$H_0: \mu_S = \mu_L$ $H_a: \mu_S \neq \mu_L$ $t = \frac{8.43 - 7.881}{0.26} = 2.160$ $t_{0.025,13} = 2.160$ Fail to reject. At the $\alpha = 0.01$ level there is not sufficient evidence to support the claim that the means are different.

$H_0: p \leq 0.5$ $H_a: p > 0.5$ $z = \frac{2.92}{0.26} = 4.54$ Reject the null & accept the alternative.
H₀: p₁ = p₃
Hₐ: p₁ ≠ p₃

\[
p = \frac{394.6 + 290.87}{1013 + 1003}
\]

\[
z = \frac{0.31 - 0.29}{0.0201} = 1.00
\]

Failed to reject. At the α = 0.05 level there is not sufficient evidence to support the claim that the proportions are different.

Yes, there appears to be a positive linear correlation. Answer appears to coincide with their graph.

\[
g = \frac{76221 - 76221}{75433 - 75433} = 0.67297\]  \[0.67297\] \[0.67297\]

With 90% confidence we can support the claim that there is linear correlation.

If you had a 78, 64 and 80 your ave would be 74. Said it or not.

Please don't freak out! Remember, it's just a final or cumulative. New material tells SWF, gage, take count too.

H₀: Proportions are same
Hₐ: Proportions are different

\[
\chi^2 = 11.345
\]

E(CA Men) = \frac{25}{10} = 2.5
T.S. = \frac{0.66 - 0.36}{0.36} \text{ and } \frac{0.82 - 0.72}{0.36} \text{ and } \frac{0.54 - 0.84}{0.36} \text{ and } \frac{0.54 - 0.84}{0.36}

\[
\chi^2 = 2.017
\]

P-Value = 0.569

Failed to reject. At the α = 0.01 level there is not sufficient evidence to suggest that the answers aren't guesses.

Instructions for TI: 1. Enter contingency table into matrix (red key). Key in row by row and proceed to key in all the numbers. 2. Stat → Tests → \(\chi^2\) test → Observed: and \(\chi^2\) names = 2 and Expected: \(\chi^2\) names = 2 and scroll down to calculate and enter.

C.E. 1 are essentially the same so that indicates there is independence (CBSE).

Since classic prob. & rel. freq are close there's not much cause to support choices not being.