At \( n \), \( n \) is a fixed interior constant.

For \( n > 25.5^\circ \), the result is:

\[ L - 145 = P + 12. \]

The \( P \) is the solution.

For \( n < 25.5^\circ \), the result is:

\[ \text{undefined} \]

Sun night 15 Dec

Sun night 16 Dec

Sun night 24 Nov

Sun night 24 Nov

Quiz 6 due tonight

Quiz due tomorrow

The night before

Next Time

Reference:

Real: LN Nr. L-37

12 Nov

173

574+7
95% confidence level not high enough for careful scientific work.

2) 95% CI for \( \mu \) no.

Declare a statistic different: this is a positive result; if you're wrong, \( \mu \) does not belong in CI, you have just created a false positive: want false positive rate low; 95% confidence level \( 100 - 95 = 5 \)% false positive rate.

Hallmark of good science: replicability of findings.

Better practice: 95% CI for 0.5% false + 99.5%.
related: \( 99.7\% \) of empirical rule

\[ 99.9\% \text{ CI} \quad \text{stat. sig.} \quad \text{practical significance} \]

\[
\text{Expected value of } \hat{p} = \left( \frac{\text{EV}}{\hat{p}} \right) = E_{\text{IID}}(\hat{p}) - \hat{p} = E_{\text{IID}}(\bar{x}) = \mu
\]

Estimated standard error of \( \hat{p} \):

\[
\text{SE}_{\text{IID}}(\hat{p}) = \frac{\sigma}{\sqrt{n}} = \frac{\hat{p}(1-\hat{p})}{\sqrt{n}} = \sqrt{\frac{\hat{p}(1-\hat{p})}{n}} = \sqrt{\frac{(0.83)(0.17)}{12}} = 11\% = 0.11
\]
math if p_i has only 2 possible values in it,

\[(p_i) = \sigma - \left(\frac{\text{larger value} - \text{smaller value}}{\sqrt{\text{fraction of larger value}} \cdot \text{fraction of smaller value}}\right)\]

1 - 0

\[p \pm (1-p)\]

math fact: with a 0/1 p_i p_i with 100p%, 15,

\[0 = \sqrt{p \cdot (1-p)}\]

the diff. between 50% (p_0) & 83

\[\text{is statistically significant}\]

(because p_0 is not in 95% CI for p) \iff lifi is probably real
SE = 11% \normal \text{ approx. } \text{CLT}

\text{hist. of } p \text{ for } \approx \text{1 in this class.}

\bar{p} = 1.96 \sqrt{\frac{\hat{p}(1-\hat{p})}{n}}

83\% \pm 2 \text{ (11\%)}

\text{approx. 95\% CI for } p

50\% \quad 61\% \quad 83\% \quad 105\%

p_{0} = \text{truncate at 100\%}

\text{devils' advocate theory} \quad (p = 50\%) \quad \text{DA's theory probably wrong}