

TECHNOLOGY CORNER

15. Confidence interval for a population proportion on the HP Prime



HP Prime can be used to construct a confidence interval for an unknown population proportion. We'll demonstrate using the previous example. Of $n = 439$ teens surveyed, $X = 246$ said they thought that young people should wait to have sex until after marriage. To construct a 95% confidence interval:

- Press **Apps** and tap the *Inference* app icon.
- Select the **Method** field, tap **Choose** and select *Confidence Interval*
- In the **Type** field, select *Z-Int: 1 π*

Inference Symbolic View

Method: Confidence interval

Type: Z-Int: 1 π

Choose a distribution statistic

Choose

- Press **Num** to enter the Numeric view. Enter $x=246$, $n=439$, and $C=0.95$.

Inference Numeric View

x: 246

n: 439

C: .95

Success count

Edit

Calc

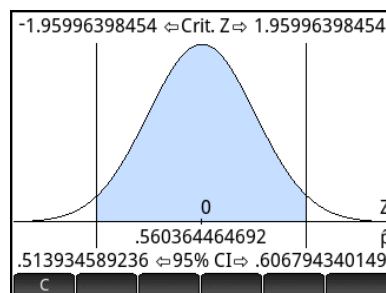
- Tap **Calc** to see the results numerically.

Results	
X	
C	.95
Crit. Z	± 1.95996398454
Lower	.513934589236
Upper	.606794340149
95%	
	Size
	OK

- Tap **OK** to return to the Numeric view

You can also view the confidence interval graphically.

- Press **Plot** to see the Plot view. The confidence interval is shown at the bottom, with the \hat{p} value and the critical z-values.



- Tap **C** to activate the dynamic confidence interval. Press \uparrow and \downarrow to increase and decrease the confidence level and see the effect on the size of the confidence interval.

