

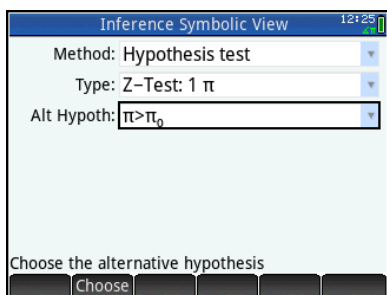


TECHNOLOGY CORNER

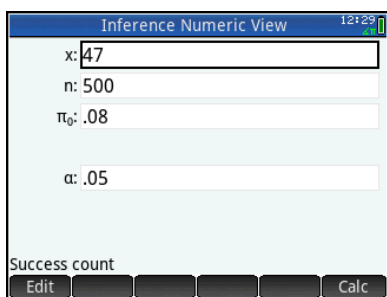
18. One-proportion z test on the HP Prime

HP Prime can be used to test a claim about a population proportion. We'll demonstrate using the previous example. In a random sample of size $n = 500$, the supervisor found $X = 47$ potatoes with blemishes. To perform a significance test:

- Press **Apps** and tap the *Inference* app icon.
- Select the **Method** field, tap **Choose** and select *Hypothesis Test*
- In the **Type** field, select *Z-Test: 1 π*
- For the alternative hypothesis, select $\pi > \pi_0$



- Press **Num** to enter the Numeric view. Enter $x=47$, $n=500$, $\pi_0=0.08$, and $\alpha=0.05$.



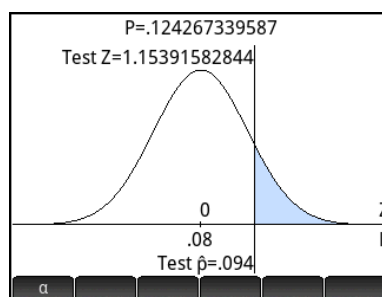
- Tap **Calc** to see the results numerically.

Results	
X	
Result	1
Test Z	1.15391582844
Test \hat{p}	.094
P	.124267339587
Crit. Z	1.64485362695
Crit. \hat{p}	.101466946812
	.124267339587

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

You can also view the confidence interval graphically.

- Press **Plot** to see the Plot view. The test probability is shown at the top, with the test z and \hat{p} values.



- Tap **α** for an alternate view of the test results. Here, the area associated with the alternative hypothesis and α -level is shown shaded in blue. The test z and \hat{p} values are shown as well. The test values clearly are not in the shaded reject region. Press **▲** and **▼** to increase and decrease the α -level.

