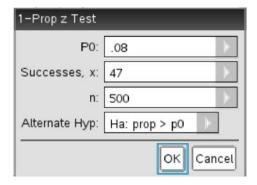
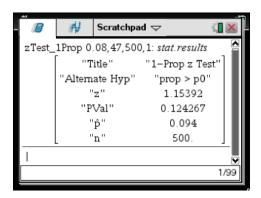
## 20. One-sample z test for a proportion the calculator

The TI-Nspire can be used to test a claim about a population proportion. We'll demonstrate using the example on page 574. In a random sample of size n = 500, the supervisor found X = 47 potatoes with blemishes. To perform a significance test:

- · Press (三面) (or (面) (A) to insert a Calculator Scratchpad.
- Press (menu)  $\rightarrow$  Statistics  $\rightarrow$  Stat Tests  $\rightarrow$  1-Prop z test.
- A dialogue box will appear. Enter the values shown:  $p_0 = 0.08$ , x = 47, and n = 500. Specify the alternative hypothesis as " $H_a$ : prop  $> p_0$ ". (tab) to or and press (enter). *Note:* x is the number of successes and n is the number of trials. Both must be whole numbers!



You can see that the test statistic is z = 1.15392 and the *P*-value is 0.1243.



To display the *P*-value as a shaded area under the Normal curve:

- · Press ব্রিতা, select the Lists & Spreadsheet icon 🕮
- · Press  $(menu) \rightarrow Statistics \rightarrow Stat\ Tests \rightarrow 1-Prop\ z\ test.$

A dialogue box will appear: Enter the values as shown in the box below. Check the box to *Shade P Value*. (tab) to ok and press (enter).

