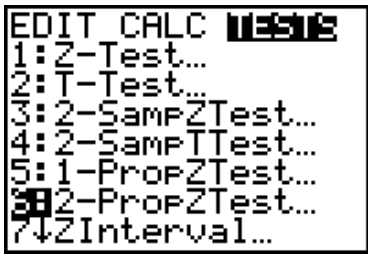
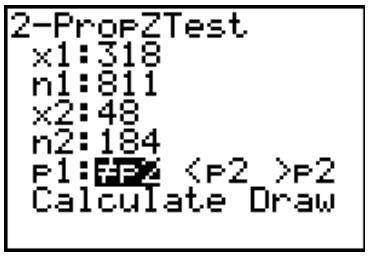
Two-Proportion z-Tests and Intervals

We know how to have the calculator find a z-Interval and conduct a z-Test for one proportion. Now let's ask it to do them for two proportions.





STAT
TESTS
We're using a Normal model to test a hypothesis based on *two samples.* So scroll down to **6:2-PropZTest**.

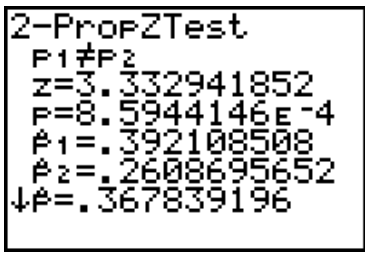
Enter **x1**, the observed number of successes (318) and **n1**, the sample size (811) from the first sample.

Enter **x2**, the observed number of successes (48) and **n2**, the sample size (184) from the second sample.

Now comes a potentially tricky question…is this test:

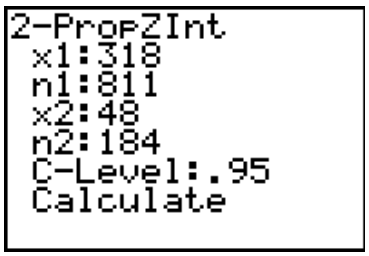
- one-tail lower,
- one-tail upper, or
- two-tailed?

Calculate



The rest is up to you! The calculator gives you the P-value; it's your job to make sense of it. You also get the sample proportion values (**p1** hat and **p2** hat) as well as the pooled proportion (**p** hat).

Is the result small enough that you *reject the null*, or is it large enough that you *fail to reject the null*? (Remember to **never** *accept the null*.)



Run back through a **2-PropZInt** (option **B**) to give you further evidence to comment on – in context, of course!