

## 21. TECHNOLOGY CORNER

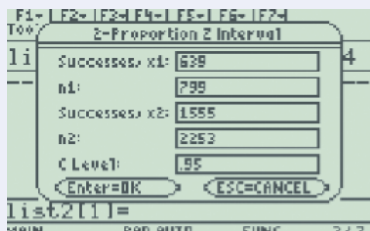
### CONFIDENCE INTERVAL FOR A DIFFERENCE IN PROPORTIONS

TI-Nspire instructions in Appendix B; HP Prime instructions on the book's Web site.

The TI-89 can be used to construct a confidence interval for  $p_1 - p_2$ . We'll demonstrate using the previous example. Of  $n_1 = 799$  teens surveyed,  $X = 639$  said they used social-networking sites. Of  $n_2 = 2253$  adults surveyed,  $X = 1555$  said they engaged in social networking. To construct a confidence interval:

TI-89

- In the Statistics/List Editor, press  $\boxed{2\text{nd}}\boxed{F2}$  ( $\boxed{F7}$ ) and choose 2-PropZInt.



**AP<sup>®</sup> EXAM TIP** The formula for the two-sample z interval for  $p_1 - p_2$  often leads to calculation errors by students. As a result, we recommend using the calculator's 2-PropZInt feature to compute the confidence interval on the AP<sup>®</sup> exam. Be sure to name the procedure (two-proportion z interval) and to give the interval (0.076, 0.143) as part of the "Do" step.