

DEAD SEA PSALMS SCROLLS

The process of estimating the number of tanks that the Germans had can be modified to estimate the number of “psalms” that exist at a site like Qumran. The bag that contains the “scroll fragments” actually contains the pages from Jon Land’s *Blood Diamonds*. We’ll pretend that each full page (two sides) contains a single “psalm”.

1. With your group members explain why it is convenient/necessary to assume that each full page is a single psalm.
2. Take a sample of $K = 25$ fragments, without replacement, from the bag and record their psalm numbers (the even page number divided by two). Explain why it is necessary to divide by two.
3. Compute the best guess estimate $\widehat{N} = \frac{K+1}{K}X_{[K]} - 1$ for your observed data. Do you think this value is too low, too high, or just about right? How often do you think it will be about right?
4. Compare your estimate with the estimates of the other class members. Decide what the best guess for the number of “psalms” is. How well did your estimate do? Was it too high or low, or were you lucky and came in about just right?
5. Explain how the above experiment relates to the finding of the Psalm Scrolls at Qumran. What comments do you have for the researchers who are looking at the scrolls?