

## Appendix A.2 Part 1 (Taking Samples)

This worksheet accompanies the article:

Richardson, M., and Gajewski, B. (2003) "Archaeological Sampling Strategies,"  
*Journal of Statistics Education* [Online], 11(1).  
<http://www.amstat.org/publications/jse/v11n1/richardson.html>

### Strategy 1:

Select a **simple random sample** of 20 of the test-pits at the site. *Start at Row 1, Column 1 on the random number table.*

How many of the selected test-pits contain artifacts?

How can the number of finds out of 20 sampled test-pits be used to estimate the total number of finds at the site?

What is the estimated total number of finds at the site?

### Strategy 2:

Select a **stratified random sample** of 20 of the test-pits at the site. Divide the site into 2 equally sized strata (use columns 1 through 5 of test-pits for Stratum I and columns 6 through 10 of test-pits for Stratum II). Sample 10 test-pits from each stratum. *For Stratum I, start at Row 5, Column 1 on the random number table. For Stratum II, start at Row 10, Column 1 on the random number table.*

What is the estimated total number of finds at the site?

### Strategy 3:

Select a **systematic random sample** of 20 test-pits at the site. Use the top row as ordered test-pit numbers 1 through 10 with the leftmost test-pit being 1 and the rightmost test-pit being 10, ..., so that the bottom row represents ordered test-pit numbers 91 through 100 with the leftmost test-pit being 91 and the rightmost test-pit being 100. *Use the random number table, Row 15, Column 1 to select your starting test-pit.*

What is the estimated total number of finds at the site?

### Strategy 4:

Select a **cluster random sample** of 20 test-pits at the site. Use the rows of test-pits for clusters. Randomly select 2 clusters (use the top row as Row 1, ..., and use the bottom row as Row 10). *Use the random number table, Row 20, Column 1 to select your two clusters.*

What is the estimated total number of finds at the site?