

Example. A forest manager is interested in estimating the number of dead fir trees in a 300-acre area of heavy infestation. Using an aerial photo, she divides the area into 200 1.5-acre plots. Let x denote the photo count of dead firs and y the actual ground count for a simple random sample of $n = 10$ plots. The total number of dead fir trees obtained from the photo count is $X_T = 4200$. Use the sample data in the following table to estimate Y_T , the total number of dead firs in the 300-acre area.

Plot Sampled	Photo Count, x_i	Ground Count, y_i
1	12	18
2	30	42
3	24	24
4	24	36
5	18	24
6	30	36
7	12	14
8	6	10
9	36	48
10	42	54