Practice Set 12   Sampling Distributions   Part II

I. Darin wants to know the proportion of page 68 parts passing inspection. Fifty parts were randomly selected from a recent production run of 1,000 parts and 45 passed inspection.

Data Set For People Using Statistics Software												
P	P	P	P	P	F	P	P	P	P	P	P	P
P	P	P	P	P	P	P	P	F	P	P	F	F
P	P	P	P	P	P	P	P	P	P	P	P	
P	P	P	P	P	P	P	P	P	F	P	P	

A. Calculate the proportion of parts passing inspection.

B. Darin would like to use last week's data to predict a range for the proportion of future production runs passing inspection. Calculate the 95% confidence interval for the proportion of parts produced by this production process passing inspection.

C. What assumption is Darin making when using last week's data to predict future manufacturing quality?

D. Calculate the 99% confidence interval for the proportion of parts passing inspection.

E. What sample size is necessary to reduce acceptable error to $\pm 5\%$?