A manufacturer has determined that on one of its assembly lines, the defective part rate is 60000 PPM (Parts Per Million), corresponding to a probability of producing a defective part of 6%. You are a Quality Engineer and told by the manufacturer’s accountants that they can afford for you to take a sample of 20 parts every hour to aid in determining the actual number of defectives at that time, but they can afford no greater disruption to production. What is the minimum number of defective parts you need to find in the sample to support management’s decision to shut down the line if, within a 95% confidence interval, your evidence suggests the tolerant 60000 PPM rate has been exceeded? The company uses Microsoft products as an office standard, so you are required to use Excel to present your reasoning.