**Chapter 6 Supplement – Solutions**

**(S6.15,S6.22,S6.27,S6.28)**

**S6.15** (a)  The total number defective is 57.



(b)  The process is out of control on the third day (of the next 3 days).

**S6.22** (a)We are counting attributes and we have no idea how many total observations there are (the proportion of drivers who weren’t offended enough to call!) This is a c-chart.

(b) Use mean of 6 weeks of observations  for 

as true  is unknown.



(c) It is in control because all weeks’ calls fall within interval of [0, 13].



(d) Instead of using we now use



LCL = 4 – 3(2) = –2, or 0. Week 4 (11 calls) exceeds UCL. Not in control.





The *Cp* tells us the machine’s variability is acceptable relative to the range of tolerance limits. But *Cpk* tells us the distribution of output is too close to the lower specification and will produce chips whose lives are too short.