Chapter 4
Poisson Processes

Problems involving Excel are not shown here.

4.1.
(a) $\Pr\{N_t \leq 4\} = 0.62884$.
(b) $\Pr\{N_t \geq 6\} = 0.80876$
(c) $\Pr\{N_t \geq 70\} \approx 0.24588$.

4.3. (a) $\Pr\{N = 4\} = 0.10815$
(b) $\Pr\{N = 0\} = 0.48031$
(c) $\Pr\{T < 5.5\} = \Pr\{N > 0\} = 0.39599$

4.5. (a) $\Pr\{N = 5\} = 0.17083$
(b) $\Pr\{N \leq 1\} = 0.55783$
(c) $\Pr\{T < 6\} = \Pr\{N > 0\} = 0.67535$

4.7. (a) The mean and standard deviation of the revenue per hour are \$1,000 and \$592, respectively. (Note that the SCV is 0.35.)
(b) The mean and standard deviation of the revenue per 10-hour day are \$10,000 and \$1,871, respectively. (Note that the SCV is 0.04.)

4.11.