

a)

$\lambda = 0.1$ packet/min

$T_s = 8$ mins

According to the formula,

$T_w = 32$

$T_q = 40$

$q = 4$

$w = 3.2$

The analysis from the last 120 min of 1200 min run of MM1 shows that,

$T_w = 36.7036369163$

$w = 3.4854133355$

Those numbers are pretty close, but not exactly may do to the fact that the longer run is needed and the decimal calculation may exceed the computing ability of the computer.

(b)

