Rubric for Homework 1
CPSC 433 Computer Networks

[P1]   5 points   (a) 2.5 (All points for hops > 18)
                      (b) 2.5 (All points for ISP's ≥ 5)

[P2]   10 points   2 for correct total Yale population
                      3 for formulation $p_k\lambda = p_{k+1}\mu(k+1)$
                      2.5 for recursion $p_k = (\rho_k/k!)\ p_0$ and setting $p_N = 0.01$
                      2.5 for getting N = 67
                      (Note: For different populations and therefore N's, I dock
                      off a few points.)

[P3]   10 points   (Quad-core) 7.5   2.5 state diagram
                                            2.5 λ, μ & formulation $(1/\mu)*(\rho/1\text{-}\rho)$
                                            2.5 for avg service time =150ms + 200
                                            ms
                      (Dual-core)   2.5   Infinite service time

[P4]   5 points   1 point docked off for wrong sub-part answers

[P5]   10 points   2 points for each of (a),(b),(c),(d),(e)

[P6]   10 points   4 for packet generation time = 7msec
                      4 for transmit time = 224 μsec
                      2 for delay = 7 + 10 + 0.224 = 17.224 msec

[P7]   5 points   2.5 figure out transmit time (depending on assumptions 38
                      days)
                      2.5 pick Fed-ex over transmit

[P8]   10 points   (a) 5 for picking and arguing for circuit switching
                      (b) 5 for argument for no congestion control

[P9]   10 points   (a) 3 points
                      (b) 2 points
                      (c) 2 points
                      (d) 3 points

[P10]   10 points   2 points for each of (a),(b),(c),(d),(e)

[P11]   10 points   5 for formulation of delay = $(\frac{S+80}{R}) * (\frac{F}{S} + 2)$

                      2.5 for setting $\frac{d}{dx}\ delay$ = 0
                      2.5 for S = $\sqrt{40F}$

[P12]   5 points   Full points if VoIP/ PSTN's are explained in argument.