Q1)

a) Define the binary logarithm (denoted in class by $\log_2 n$).

b) What is the binary logarithm of 42?

c) Write a number whose binary logarithm is 5. How many such numbers are there?

d) Give pseudocode to compute the binary logarithm. Assume the input is an integer stored in a variable called *n*. Your program has to print $\log_2 n$.

e) Estimate the running time of your pseudocode.

Q2)

Write a Turing-Post program that prints the bit sequence 101 infinitely often, as well as its binary code.

Q3)

For this question you have to blog in about 300 words (or more if you like) about either one of the following two topics, drawn from the first two weeks' readings from Brooks's book. Whichever topic you choose, please try to give inject a personal element based upon your experience with Scribbler so far.

a) Brooks's design of Genghis, and whether reading about it changed your perception about machine intelligence.

b) Brook's vision of machines to live with, and how you feel about that vision.

After posting your blog entry, please read at least two other blog entries and leave a brief comment or response for each.