Solve this problem by modifying a copy of 
http://www.ece.lsu.edu/ee3755/2001f/hw05.html which can also be found in 
/home/classes/ee3755/com/v/hw05.v. See 
http://www.ece.lsu.edu/ee3755/proc.html for instructions on running the simulator. Alternate instructions can be found in Lesson 7 of the ModelSim Tutorial, linked to the references web page, http://www.ece.lsu.edu/ee3755/ref.html. The links are clickable when this assignment is viewed with Acrobat Reader. The ModelSim tutorial and other documentation can also be accessed from the Help menu on the ModelSim GUI (started by the command vsim -gui).

Copy the homework template, /home/classes/ee3755/com/v/hw05.v, into a subdirectory named hw in your class account.

**Problem 1:** Complete module itod so that it converts the 52-bit signed integer on input int to an IEEE 754 double-precision floating point value, which is placed on output double. The module should synthesize to combinational logic. See the solution template for additional instructions.

**Problem 2:** Complete module pop64 so that it sets output p to the population of input n after no more than four positive edges of input clk. The module must use a single instance of pop32 to compute the population. See the solution template for additional instructions.