Name: _____

Registration: _____

(10 pts.) Given the following partial module for a 2Kx64 RAM chip, fill in the blanks to complete the module.

```
module RAM (adr, CS, RW, d_i, d_o);

     input CS, RW;
     input [10:0] adr;
     input [63:0] d_i;
     output [63:0] d_o;
     reg [63:0] d_out;
     reg [63:0] Mem1 [0:2047];

     assign d_o = (CS && RW)?d_out:64'bz;

     always @(adr or d_i or CS or RW)
          if (CS && !RW)
               Mem1 [adr] = d_i;
     always @(adr or CS or RW)
          if (CS && RW)
               d_out = Mem1 [adr];

     initial
          $readmemh ("memory1.dat", Mem1);

endmodule
```