Answer each of the following questions (you can use a calculator). Recall that if a TRISB bit is a ‘1’, the corresponding port bit is an input.

a. (6 pts) Assume a pushbutton switch is connected to port RB1 in low-true configuration (a push produces 0 V, a release 5 V), and a high-true LEDs to ports RB3, RB4. (logic 1 turns on LED, logic 0 turns off LED). Write code that will configure PORTB for this mode, and turn the LEDs initially off. Then write a loop such that the following occurs (you do not have to debounce the switches)
   1. After press & release, RB3 LED ON, RB4 ON
   2. After press RB3 LED OFF
   3. After release, RB4 OFF
   4. goto 1.

   ```c
   TRISB1 = 1; //input
   TRISB3 = 0; //output
   TRISB4 = 0; //output
   RB3 = 0; RB4 =0; // both LEDs off
   while(1) {
      while(RB1);  //wait for press
      while(!RB1); //wait for release
      RB3 = 1; RB4 = 1;  //RB3 ON, RB4 ON
      while(RB1);  //wait for press
      RB3 = 0;     // RB3 off
      while(!RB1); //wait for release
      RB4 = 0;     // RB4 off
   }
   ```

b. When the Watchdog timer expires during normal code execution, what happens?
   When the watchdog timer expires when the PIC is asleep, what happens?

   The PIC is reset (next instruction fetched from location 0x0000) when the WDT expires during normal operation.

   The PIC begins executing where it left off (wakes up) if the WDT expires while asleep; this means it executes the instruction immediately following the SLEEP instruction.