ME 333
Quiz 6

1. A change notification interrupt pin is more general, in that it can detect a wide range of interrupts, whereas an external interrupt pin detects interrupts from an external source and can account for rising or falling edges.

2. CoreTimer vs Timer2
   Timer2 is a peripheral while the core timer is part of the CPU. The core timer also cannot be scaled while Timer2 can.

3. TMR1 can go up to 62499. Using N=256 allows a maximum of 15999744 input pulses before TMR1 rolls over.

4. OC4 and Timer2: 2000 Hz PWM with 20% duty cycle, N=2
   48 MHz → 20.833 ns
   2000 Hz →500,000 ns

   Period = (PR2+1)*N*20.833
   500,000 = (PR2+1)*2*20.833
   PR2 = 11999 ns

   Duty cycle = OC4RS/(PR2+1)
   0.2 = OC4RS(12000)
   OC4RS = 2399

5. 2 main steps in the process of reading an analog input: sampling and conversion.
   Sampling is done through the differencing amp and conversion is done through the ADC.