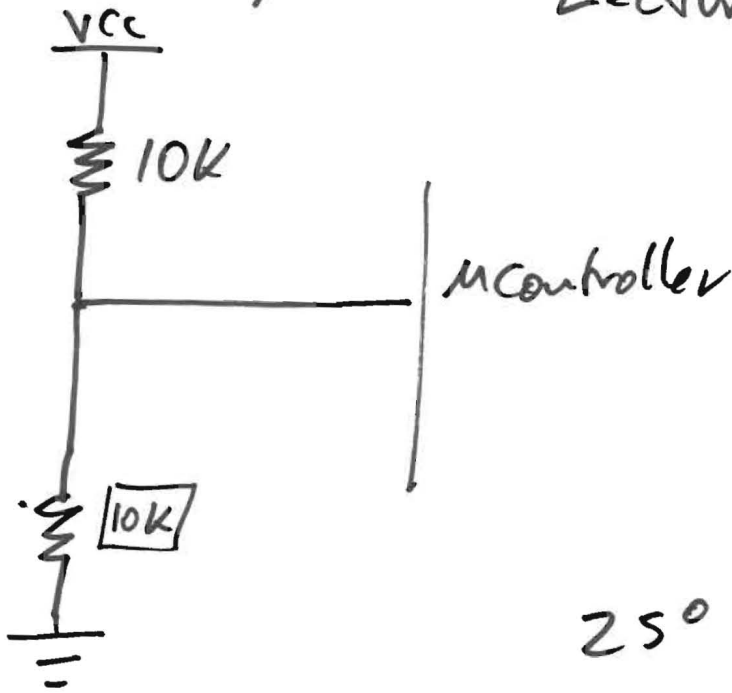


# ECGR410/5101 - Lecture 16 -

①



$$25^\circ \rightarrow V = \frac{1}{2} V_{CC} = 1.650$$

$$\left[ \frac{3.3 - 1.65}{3.3} * 2^n - 1 \right] + \frac{1}{2}$$

$$\left[ \frac{1}{2} 2^n - 1 \right] + \frac{1}{2}$$

~~1024~~

$$\frac{1}{2} 1024 - 1 + \frac{1}{2}$$

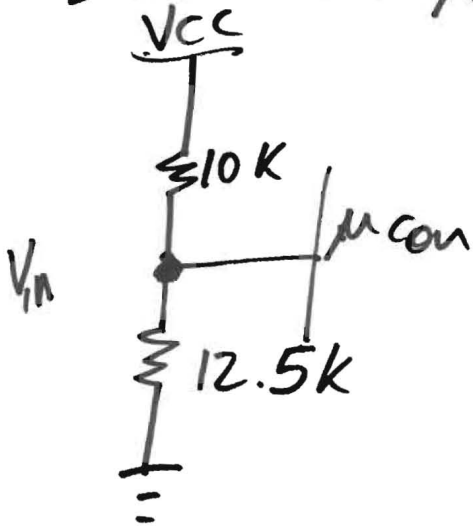
$$511.5 + \frac{1}{2} = 512$$

$$1000000_{10} / 00000_2$$

25°C → 200k  
77°F → 1E0k

# ECGR4101/5101 - Lecture 16

②



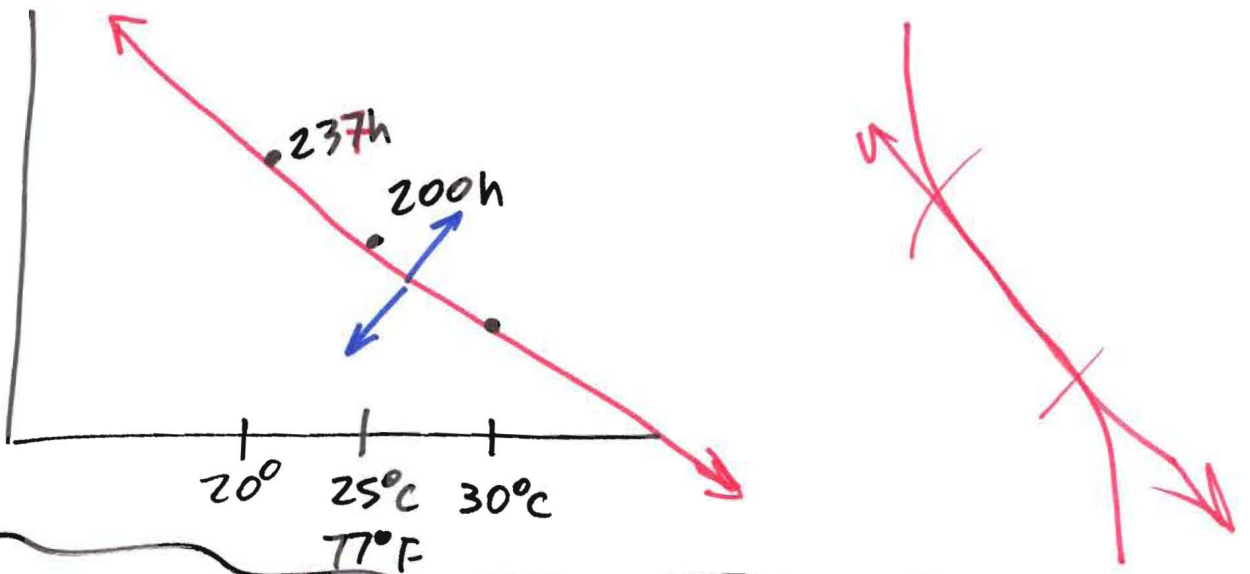
$$V_{in} = 1.83$$

$$= 10 \text{ bits}, = \underline{\quad} h$$

$$\left\lceil \frac{1.83V \cdot 2^n - 1}{3.3V} \right\rceil + \frac{1}{2}$$

$$= 0.5545 \cdot 1023 + \frac{1}{2}$$

$$= 567 = 237h$$



void my\_isr(void) {

P10.7=1; // p10.7 is set up as output  
 :the interrupt service routine "guts" go here

P10.7=0; //exit isr  
 }

up to slide 12-6