EECS 312 – Electronic Circuits I – Homework 3
Carl Leuschen – Spring 2025

1. Fill in the missing values in the table. Diodes A to F are Junction Diodes. Assume V_T=25mV.

Diode	I_S (A)	n	V_D (V)	I_D (mA)	P_D (mW)
A	$1x10^{-14}$	1.2	0.65		
B	$1x10^{-9}$	1.7		3	
C	$3x10^{-12}$		0..68	2	
D		1.9	0.5	.01	
E		1.1		1.3	1
F	$1x10^{-13}$		.67		20

2. A Junction Diode with n=1.3 conducts 0.8mA at 0.7V, $I_D(V_D=0.7V)=0.8mA$.
   a. How much does the device conduct (find I_D) at V_D=0.8V? 0.6V? 0.5V?

   b. What voltage (find V_D) would produce a current of I_D=80uA? 8mA? 80mA?

3. Find the I1 and V1 in the following circuit. Use $I_S=7x10^{-13}$ A and n=1.5 for the diodes.