EE351 Test1 2016								
Problem 1:								
0.1	Vs	0.625	input voltage divider					
600	Rs	0.769	voltage divider to stage 2					
1,000	Rin1	0.690	voltage divider to load					
250	Av1	112.7	voltage gain (loaded)					
1,500	Ro1	317,713	power gain					
5,000	Rin2	**55.0**	dB power gain					
0.85	Av2							
18	Ro2							
40	RL							
Problem 2:								
0.700	Vd	0.0259	kT/q	0.026				
300	T	**10.5E-3**	I					
15.0E-9	Is	**4.9**	rd					
2.0	n							
Problem 3:								
5	V1	**Forward**	D1					
8	V2	**Reverse**	D2					
Problem 4:			0.705	VBEmax			**160**	RE chosen
2200	Ro		0.529	VBEmin		3,996	RB	
-30	Av		1.585	VBB min		12.618	VCC/VBB	
20	VCC		0.617	VBEnom		11.618	(RB1/RB2)	
9	VCQ		24.974	(RB/RE)max		50,421	RB1 calculated	
1.2	KT, KB		141	Bnom			**51,000**	RB1 chose
80	Tmax		**2,200**	RC		4,390	RB2 calculated	
0	Tmin		5.000E-3	ICQ			**4,300**	RB2 chose
0.65	VBE at 25C		5.035E-3	IEQ		67.7	RE' needed	
-0.0022	d VBE/C		163.6	RE calculated		117.2	RE1 calculated	
250	Bmax		5.2	re			**120**	RE1 chose
80	Bmin		0.993	B/(B+1)				
Problem 5:								
VBEnom	0.617		**1.555**	**VBB**	**9.1**	**VCQ**		
Bnom	141		**3,966**	**RB**	5.2	re		
0.026	VT		**4.994E-3**	**IE**	68.6	RE'		
3,000	RL		0.993	B/(B+1)	-29.6	Av		
			4.959E-3	IC	**-17.1**	**Avl**		
Problem 6:								
0.008	IE	3.250	re					
0.026	VT	600	RE||RL					
150	B	91,091	rbt					
20,000	RB	**16,399**	**Rin**					
1,000	RE	**0.995**	**Avl**					
1,500	RL