Mühendislik Matematiği Ödev No 5

1) $f(x,y,z)=x^A y^B z^C$ fonksiyonunun P(1,2,3) noktasındaki turevin en büyük değerini ve en küçük değerini hesaplayın.

2) z=($x+D)^2 +(y+E)^2$ fnksiyonunu 3 boyutlu uzayda yaklaşık olarak çizin.

3)$y=x^3$ eğrisini x-y düzleminde ve x,y,z uzayında yaklaşık olarak çizin.

4)Aşağıdaki Kartezyen koordinat sistemindeki noktaları kutupsal koordinat sistemine çevirin.

	x	y	r	θ
P_1	F	G		
P_2	-F	G		
P_3	F	-G		
P_4	-F	-G		

5)kutupsal koordinatlarda verilen r=Hθ+π ergisini yaklaşık olarak çizin.

6)kutupsal koordinatlarda verilen r=K+Mcosθ eğrisini yaklaşık olarak çizin.

7) ρ=4, θ=60, ϕ=-80 şeklinde küresel koordinat sisteminde verilen noktayı

Kartezyen koordinat sistemine çevirin. θ: x ekseni ile aradaki açı. ϕ:z ekseni ile aradaki açıdır.

No	A	B	C	D	E	F	G	H	M
9999	0.4	0.3	-0.6	6	-2	7	5	1	1
20110011002	0.5	0.5	-0.6	6	-6	5	5	2	3
20110011054	-0.5	0.2	0.5	6	-3	2	4	1	2
21110011013	0.2	-0.4	0.3	4	-4	1	2	2	2
21110011073	0.4	0.7	-0.5	7	-6	2	2	2	2
22110011010	-0.6	0.2	0.6	6	-3	4	6	3	3
22110011015	0.6	0.2	-0.3	4	-2	7	6	3	1
22110011020	-0.4	0.6	0.5	-2	2	5	6	2	2
22110011027	0.7	-0.4	0.3	-4	3	4	7	3	2
22110011031	0.6	-0.4	0.5	5	-1	6	4	1	3
22110011044	0.4	-0.6	0.5	-3	4	7	1	3	3
22110011046	0.5	-0.4	0.7	6	-3	4	7	2	2
22110011048	0.4	-0.3	0.2	-2	3	5	4	2	2
22110011050	0.4	0.6	-0.6	7	-2	5	7	3	3
22110011051	-0.7	0.4	0.6	-3	2	3	4	3	3
22110011303	0.4	0.3	-0.6	6	-2	7	5	1	1
22110011361	0.2	-0.6	0.7	5	-6	6	3	2	2
22110011363	0.4	0.5	-0.3	5	-2	2	6	3	1

22110011364	0.4	-0.7	0.7	-3	4	7	6	3	2
22110011369	0.6	0.6	-0.6	5	-1	3	2	2	3
23110011003	0.4	0.4	-0.6	-2	2	1	4	2	2
23110011006	0.7	-0.3	0.5	-3	4	4	4	2	2
23110011007	0.7	0.7	-0.4	-2	5	3	3	2	3
23110011014	0.2	0.5	-0.7	-2	3	4	4	3	3
23110011027	-0.4	0.6	0.5	5	-2	2	2	2	3
23110011030	0.5	0.7	-0.5	6	-2	2	5	3	3
23110011034	-0.6	0.5	0.5	-1	2	2	4	2	2
23110011035	0.3	0.5	-0.3	7	-2	5	4	2	1
23110011038	0.4	0.4	-0.4	-4	3	6	3	3	3
23110011039	-0.6	0.7	0.7	2	-1	7	2	3	3
23110011042	0.6	0.6	-0.6	4	-4	5	1	3	2
23110011045	0.5	0.6	-0.4	3	-4	1	4	2	2
23110011048	0.7	-0.7	0.6	7	-4	2	1	2	3
23110011304	0.2	0.4	-0.3	-4	4	7	4	2	3
23110011312	0.4	-0.7	0.7	-2	2	2	6	1	2
24110011002	0.4	0.2	-0.5	-5	2	1	7	3	3
24110011003	-0.3	0.5	0.4	-5	2	6	6	2	2
24110011004	0.2	-0.3	0.4	-6	7	4	2	3	1
24110011005	-0.6	0.5	0.7	5	-5	4	3	3	3
24110011006	-0.7	0.3	0.4	-4	5	6	7	1	2
24110011009	0.4	-0.3	0.4	5	-3	5	4	3	2
24110011010	0.6	-0.7	0.6	-2	7	6	3	2	2
24110011012	-0.5	0.5	0.3	3	-5	4	6	2	3
24110011014	0.7	-0.6	0.4	-3	7	7	6	3	3
24110011015	0.5	-0.4	0.4	-7	6	3	3	2	2
24110011016	0.7	0.5	-0.6	2	-6	2	6	2	1
24110011017	0.7	-0.7	0.5	7	-2	6	2	3	3
24110011019	-0.3	0.5	0.5	3	-4	6	6	1	3
24110011020	0.6	-0.6	0.5	-1	7	2	6	1	3
24110011021	-0.5	0.5	0.7	7	-2	4	6	2	3
24110011022	-0.4	0.2	0.7	-5	2	3	2	3	1
24110011025	0.2	0.4	-0.5	-6	2	2	5	3	2
24110011026	-0.4	0.5	0.3	3	-3	7	3	2	1
24110011309	0.7	-0.4	0.3	6	-3	6	3	2	3
24110011310	0.4	0.3	-0.7	-7	4	5	6	1	3
24110011506	0.6	0.3	-0.4	-7	5	2	4	1	1
24110011511	0.2	0.2	-0.4	3	-6	7	3	3	3
24110011512	0.7	0.7	-0.3	-7	7	3	6	3	2
24110011519	0.6	0.6	-0.2	-1	2	4	6	2	2
24110011520	0.6	0.2	-0.2	-1	5	3	4	2	2
24110011532	-0.3	0.2	0.5	5	-4	2	3	3	2
24110011533	0.3	-0.6	0.4	7	-7	4	1	1	2
24110011534	0.5	0.7	-0.4	5	-7	5	3	2	1
24110011535	0.3	-0.7	0.7	-7	3	7	1	2	2

25110011302	0.3	-0.4	0.2	6	-7	5	1	2	3
25110011303	0.6	-0.6	0.2	5	-3	3	2	2	3
25110011304	0.3	0.7	-0.7	2	-7	5	4	3	3
25110011306	0.5	-0.3	0.5	-2	4	2	6	3	3
25110011307	-0.4	0.6	0.6	1	-3	5	4	2	2
25110011309	0.5	-0.6	0.5	4	-4	2	4	2	3
25110011313	0.3	-0.3	0.5	5	-6	5	6	2	2
25110011314	0.4	0.2	-0.6	6	-1	4	2	2	3
25110011515	0.3	-0.3	0.3	7	-3	2	2	2	3
No	A	B	C	D	E	F	G	H	M