3.3. Для таблично заданной функции путем решения нормальной системы МНК найти приближающие многочлены а) 1-ой и б) 2-ой степени. Для каждого из приближающих многочленов вычислить сумму квадратов ошибок. Построить графики приближаемой функции и приближающих многочленов.

1.							
	i	0	1	2	3	4	5
	X_{i}	-1.0	0.0	1.0	2.0	3.0	4.0
	y_i	-0.5	0.0	0.5	0.86603	1.0	0.86603
2.							
	i	0	1	2	3	4	5
	X_i	-1.0	0.0	1.0	2.0	3.0	4.0
	y_i	0.86603	1.0	0.86603	0.50	0.0	-0.50
3.							
	i	0	1	2	3	4	5
	$\boldsymbol{\mathcal{X}}_i$	-0.9	0.0	0.9	1.8	2.7	3.6
	y_i	-0.36892	0.0	0.36892	0.85408	1.7856	6.3138
4.							
	i	1.0	1.9	2 2.8	3.7	4 4.6	5 5.5
	X_i						
	y_i	2.4142	1.0818	0.50953	0.11836	-0.24008	-0.66818
5.	i	0	1	2	3	4	5
		0.1	0.5	0.9	1.3	1.7	2.1
	X_i	-2.3026	-0.69315	-0.10536	0.26236	0.53063	0.74194
	\mathcal{Y}_i						
6.	i	0	1	2	3	4	5
	X_i	-3.0	-2.0	-1.0	0.0	1.0	2.0
	y_i	0.04979	0.13534	0.36788	1.0	2.7183	7.3891
7.	- 1						
	i	0	1	2	3	4	5
	X_{i}	0.0	0.2	0.4	0.6	0.8	1.0
	y_i	1.0	1.0032	1.0512	1.2592	1.8192	3.0
8.							
	i	0	1	2	3	4	5
	X_{i}	-0.7	-0.4	-0.1	0.2	0.5	0.8
	y_i	-0.7754	-0.41152	-0.10017	0.20136	0.5236	0.9273
9.	•		1	0	2		- 1
	i	0 -0.7	1 -0.4	2 -0.1	3	4 0.5	5
	\mathcal{X}_{i}	2.3462	1.9823	1.671	1.3694	1.0472	0.6435
1.0	y_i	2.3402	1.9023	1.0/1	1.3094	1.04/2	0.0433
10.	i	0	1	2	3	4	5
		-5.0	-3.0	-1.0	1.0	3.0	5.0
	$\frac{x_i}{y}$	-1.3734	-1.249	-0.7854	0.7854	1.249	1.3734
	y_i						

11.							
	i	0	1	2	3	4	5
	X_{i}	-5.0	-3.0	-1.0	1.0	3.0	5.0
	y_i	2.9442	2.8198	2.3562	0.7854	0.32175	0.1974
12.							
	i	0	1	2	3	4	5
	X_i	-1.0	0.0	1.0	2.0	3.0	4.0
	y_i	-1.8415	0.0	1.8415	2.9093	3.1411	3.2432
13.							
	i	0	1	2	3	4	5
	X_i	-1.0	0.0	1.0	2.0	3.0	4.0
	y_i	-0.4597	1.0	1.5403	1.5839	2.010	3.3464
14.							
	i	0	1	2	3	4	5
	X_{i}	-0.9	0.0	0.9	1.8	2.7	3.6
	y_i	-1.2689	0.0	1.2689	2.6541	4.4856	9.9138
15.							
	i	0	1	2	3	4	5
	X_{i}	1.0	1.9	2.8	3.7	4.6	5.5
	y_i	3.4142	2.9818	3.3095	3.8184	4.3599	4.8318
16.							
	i	0	1	2	3	4	5
	X_{i}	0.1	0.5	0.9	1.3	1.7	2.1
	y_i	-2.2026	-0.19315	0.79464	1.5624	2.2306	2.8419
17.							
	i	0	1	2	3	4	5
	X_{i}	-3.0	-2.0	-1.0	0.0	1.0	2.0
	y_i	-2.9502	-1.8647	-0.63212	1.0	3.7183	9.3891
18.							
	i	0	1	2	3	4	5
	X_i	0.0	1.7	3.4	5.1	6.8	8.5
	y_i	0.0	3.0038	5.2439	7.3583	9.4077	11.415
19.							
	i	0	1	2	3	4	5
	X_i	-0.7	-0.4	-0.1	0.2	0.5	0.8
	y_{i}	-1.4754	-0.81152	-0.20017	0.40136	1.0236	1.7273
20.							
	i	0	1	2	3	4	5
	X_{i}	-0.7	-0.4	-0.1	0.2	0.5	0.8
	y_i	1.6462	1.5823	1.571	1.5694	1.5472	1.4435
21.							
	i	0	1	2	3	4	5
	X_i	-5.0	-3.0	-1.0	1.0	3.0	5.0
	y_i	-6.3734	-4.249	-1.7854	1.7854	4.249	6.3734

22.							
	i	0	1	2	3	4	5
	X_{i}	-5.0	-3.0	-1.0	1.0	3.0	5.0
	y_i	-2.0558	-0.18016	1.3562	1.7854	3.3218	5.1974
23.							
-	i	0	1	2	3	4	5
	X_i	0.1	0.5	0.9	1.3	1.7	2.1
	y_i	10.	2.0	1.1111	0.76923	0.58824	0.47619
24.			-				
-	i	0 0.1	1	2	3 1.3	4 1.7	5 2.1
-	X_{i}						
	y_i	100.0	4.0	1.2346	0.59172	0.34602	0.22676
25.	•		1	2	3	4	
	i	0 0.1	0.5	0.9	1.3	4 1.7	5 2.1
-	X_i						
	y_i	10.1	2.5	2.0111	2.0692	2.2882	2.5762
26.	•		1	2	2	4	
-	i	0 0.1	1	0.9	3 1.3	4 1.7	5 2.1
-	X_i	100.01	4.250		2.2817	3.236	4.6368
	y_i	100.01	4.250	2.0446	2.2817	3.230	4.0308
27.	i	0	1	2	3	4	5
-	$\frac{\iota}{x_i}$	-1.0	0.0	1.0	2.0	3.0	5.0
-		0.5	0.0	0.5	1.7321	3.0	2.5
28.	y_i						
20.	i	0	1	2	3	4	5
-	X_i	-1.0	0.0	1.0	2.0	3.0	5.0
-	y_i	-0.86603	0.0	0.86603	1.0	0.0	-4.3301
29.							
	i	0	1	2	3	4	5
	X_{i}	-3.0	-2.0	-1.0	0.0	1.0	2.0
-	y_i	-0.14936	-0.27067	-0.36788	0.0	2.7183	14.778
30.							
	i	0	1	2	3	4	5
	x_{i}	-1.7	-1.2	-0.7	-0.2	0.3	0.8
	y_i	0.52796	0.43372	0.24333	0.03275	0.12149	1.4243