

Lp.	Kod - dane	Zachorowania	Zgony	Populacja w 2020 (źródło - covid)	Populacja w 2019 (źródło - piramida)	Populacja z roku 2019 (w przedziałach wiekowych)									
						0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90+
1.	USA	1,298,287	78,652	331,002,651	329,064,917	39891845	42398071	46179065	43980069	40288440	42557686	37845098	23009234	10108211	2807198
2.	RUS	232,203	2,116	145,934,462	145,872,257	18561902	14795855	16599344	24452747	19983554	19449736	18094236	8266872	4869985	798026
3.	TUR	139,771	3,841	84,339,067	83,429,607	13501499	13585939	13087611	12748548	11221844	8664742	5968559	3216491	1294087	140287
4.	GER	170,608	7,533	83,783,942	83,517,045	7726915	7948424	9421661	10770439	10400203	13574883	10347526	7589596	4758437	978961
5.	UK	223,064	32,065	67,886,011	67,530,161	8065283	7569160	8630614	9203569	8624679	9138365	7206475	5673457	2762465	656094
6.	FRA	137,491	26,600	65,273,511	65,129,729	7606630	7857054	7415448	8007883	8408482	8600917	7758713	5456311	3129690	888601
7.	ITA	219,814	30,739	60,461,826	60,550,092	5103576	5740332	6135226	7100743	9225165	9453168	7391126	5935048	3626542	839166
8.	ESP	227,436	26,744	46,754,778	46,736,782	4340417	4682339	4652133	6158281	7935505	6944643	5200462	3921750	2318365	582887
9.	UKR	16,023	425	43,733,762	43,993,643	4688013	4279672	5165651	7259196	6313137	6006155	5470675	2961499	1603270	246375
10.	POL	16,326	811	37,846,611	37,887,770	3812694	3683606	4614458	6098806	5397403	4653080	5155357	2736204	1440736	295426
11.	ROU	15,588	983	19,237,691	19,364,558	1939134	2069083	2174981	2621141	3076100	2508724	2559619	1482916	815374	117486
12.	NED	42,788	5,456	17,134,872	17,097,122	1762690	1973468	2106722	2075858	2201959	2520370	2109482	1526904	680253	139416
13.	BEL	53,449	8,707	11,589,623	11,539,326	1305219	1298970	1395385	1498535	1524152	1601891	1347696	908725	535484	123269
14.	POR	27,679	1,128	10,196,709	10,226,178	856604	1029022	1076533	1253640	1587112	1472388	1282301	997530	565534	105514
15.	SWE	26,670	3,256	10,099,265	10,036,391	1191245	1106232	1304961	1289302	1277210	1280608	1097278	967449	416228	105878
16.	BLR	23,906	135	9,449,233	9,452,409	1134208	910479	1147255	1510155	1278833	1374474	1190629	533029	321280	52067
17.	AUT	15,926	628	9,006,398	8,955,108	863022	877100	1124426	1224528	1195561	1402944	1000416	789863	386547	90701
18.	ISR	16,526	258	8,655,535	8,519,372	1654530	1377821	1178880	1117905	1019070	779142	702437	430872	206028	52687
19.	SUI	30,261	1,542	8,654,622	8,591,361	875799	835663	1047321	1211148	1177086	1309842	953874	731996	361634	86998
20.	DEN	10,513	533	5,792,202	5,771,877	607866	679998	774991	662575	752091	803945	657184	566946	216587	49694
21.	IRE	23,135	1,467	4,937,786	4,882,498	683362	653400	559110	710607	747666	587995	473864	314560	127022	24912

Równanie regresji (względem) wielu zmiennych z notatki 8: $\beta = (X^T X)^{-1} X^T Y$

		Kraj	Macierz X (ludność w przedziałach wiekowych):												
		USA	1	39891845	42398071	46179065	43980069	40288440	42557686	37845098	23009234	10108211	2807198		
		RUS	1	18561902	14795855	16599344	24452747	19983554	19449736	18094236	8266872	4869985	798026		
		TUR	1	13501499	13585939	13087611	12748548	11221844	8664742	5968559	3216491	1294087	140287		
		GER	1	7726915	7948424	9421661	10770439	10400203	13574883	10347526	7589596	4758437	978961		
		UK	1	8065283	7569160	8630614	9203569	8624679	9138365	7206475	5673457	2762465	656094		
		FRA	1	7606630	7857054	7415448	8007883	8408482	8600917	7758713	5456311	3129690	888601		
		ITA	1	5103576	5740332	6135226	7100743	9225165	9453168	7391126	5935048	3626542	839166		
		ESP	1	4340417	4682339	4652133	6158281	7935505	6944643	5200462	3921750	2318365	582887		
		UKR	1	4688013	4279672	5165651	7259196	6313137	6006155	5470675	2961499	1603270	246375		
		POL	1	3812694	3683606	4614458	6098806	5397403	4653080	5155357	2736204	1440736	295426		
		ROU	1	1939134	2069083	2174981	2621141	3076100	2508724	2559619	1482916	815374	117486		
		NED	1	1762690	1973468	2106722	2075858	2201959	2520370	2109482	1526904	680253	139416		
		BEL	1	1305219	1298970	1395385	1524152	1601891	1347696	908725	535484	123269			
		POR	1	856604	1029022	1076533	1253640	1587112	1472388	1282301	997530	565534	105514		
		SWE	1	1191245	1106232	1304961	1289302	1277210	1280608	1097278	967449	416228	105878		
		BLR	1	1134208	910479	1147255	1510155	1278833	1374474	1190629	533029	321280	52067		
		AUT	1	863022	877100	1124426	1224528	1195561	1402944	1000416	789863	386547	90701		
		ISR	1	1654530	1377821	1178880	1117905	1019070	779142	702437	430872	206028	52687		
		SUI	1	875799	835663	1047321	1211148	1177086	1309842	953874	731996	361634	86998		
		DEN	1	607866	679998	774991	662575	752091	803945	657184	566946	216587	49694		
		IRE	1	683362	653400	559110	710607	747666	587995	473864	314560	127022	24912		
		Kraj	Wektor Y1 (Zachorowania):				Wektor Y2 (Zgony):				Grupa	Indeks	B1	B2	
		-	-				-				-	b0	-7707.00	-1678.05	
		USA	1,298,287				78,652				0-9	b1	0.10	0.01	
		RUS	232,203				2,116				10-19	b2	-0.17	-0.01	
		TUR	139,771				3,841				20-29	b3	0.11	0.00	
		GER	170,608				7,533				30-39	b4	-0.14	-0.01	
		UK	223,064				32,065				40-49	b5	0.09	0.01	
		FRA	137,491				26,600				50-59	b6	0.09	0.00	
		ITA	219,814				30,739				60-69	b7	0.00	0.00	
		ESP	227,436				26,744				70-79	b8	-0.06	0.01	
		UKR	16,023				425				80-89	b9	-0.22	-0.02	
		POL	16,326				811				90+	b10	0.53	0.05	
		ROU	15,588				983								
		NED	42,788				5,456								
		BEL	53,449				8,707								
		POR	27,679				1,128								
		SWE	26,670				3,256								
		BLR	23,906				135								
		AUT	15,926				628								
		ISR	16,526				258								
		SUI	30,261				1,542								
		DEN	10,513				533								
		IRE	23,135				1,467								

Dane procentowe															
Lp.	Kod - dane	Zachorowania	Zgony	Populacja w 2020 (źródło - covid)	Populacja w 2019 (źródło - piramida)	Populacja z roku 2019 (w przedziałach wiekowych)									
						0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90+
1.	USA	0.392%	0.024%	331,002,651	329,064,917	12.12%	12.88%	14.03%	13.37%	12.24%	12.93%	11.50%	6.99%	3.07%	0.85%
2.	RUS	0.159%	0.001%	145,934,462	145,872,257	12.72%	10.14%	11.38%	16.76%	13.70%	13.33%	12.40%	5.67%	3.34%	0.55%
3.	TUR	0.166%	0.005%	84,339,067	83,429,607	16.18%	16.28%	15.69%	15.28%	13.45%	10.39%	7.15%	3.86%	1.55%	0.17%
4.	GER	0.204%	0.009%	83,783,942	83,517,045	9.25%	9.52%	11.28%	12.90%	12.45%	16.25%	12.39%	9.09%	5.70%	1.17%
5.	UK	0.329%	0.047%	67,886,011	67,530,161	11.94%	11.21%	12.78%	13.63%	12.77%	13.53%	10.67%	8.40%	4.09%	0.97%
6.	FRA	0.211%	0.041%	65,273,511	65,129,729	11.68%	12.06%	11.39%	12.30%	12.91%	13.21%	11.91%	8.38%	4.81%	1.36%
7.	ITA	0.364%	0.051%	60,461,826	60,550,092	8.43%	9.48%	10.13%	11.73%	15.24%	15.61%	12.21%	9.80%	5.99%	1.39%

[illegible]