



SPEERORAMA (LSW)

Yearly age
coefficients

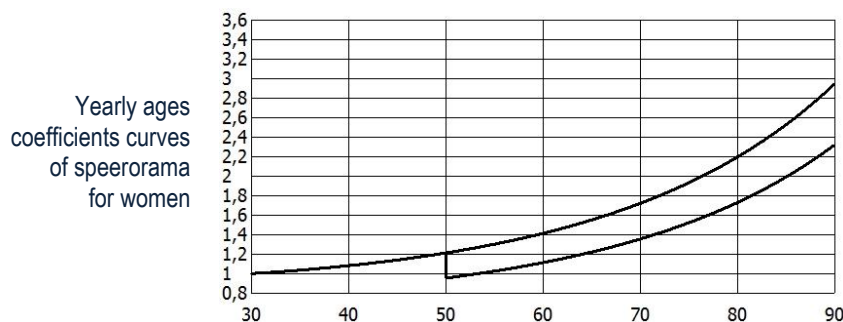
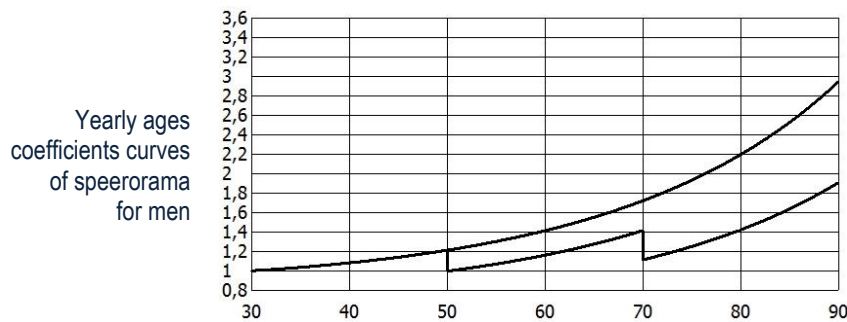
Speerorama **regulations** can be found at:

<http://www.joomla.lsw-spezisport.de/Anlagen/LSW-Wettkampfordnung.pdf>

Lithuania is a small country, so often in different age groups participate one, two athletes only (in some age groups there are no sportsmen). Thus, yearly age coefficients are not only desirable, they are necessary in Lithuania. We hope that other countries will use the Lithuanian yearly age coefficients too.

Yearly age coefficients are determined using the exponential function: $k = A \cdot e^{a+b \cdot m^n}$. In equation: k is yearly age coefficient, A is the coefficient, which evaluates the increase of result (decrease of yearly age coefficient) when the mass of shots is changing, m is the age of the athlete (in years) at the time of sport event (it is calculated by deducting athlete's birthday from the first day of the competition), a and b are coefficients that depend on the statistically obtained averages of the results in age groups, n is the exponent.

Men		Women	
$k = e^{(-0,07350)+0,00001496m^{2,5}}$		$k = e^{(-0,07350)+0,00001496m^{2,5}}$	
when $m \leq 49$,	then $A=1.0000$,	when $m \leq 49$,	then $A=1.0000$,
when $50 \leq m \leq 69$,	then $A=0.8221$,	when $m \geq 50$,	then $A=0.7879$.
when $m \geq 70$,	then $A=0.6477$.		



Note. Yearly age coefficients are presented in the table. Their meanings are rounded to four significant digits. These rounded meanings should be used on computer programs; otherwise the results calculated using the formula given and results presented in the table will differ slightly.



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Men	Age	Women
1.000	30	1.000
1.007	31	1.007
1.013	32	1.013
1.020	33	1.020
1.028	34	1.028
1.036	35	1.036
1.044	36	1.044
1.052	37	1.052
1.061	38	1.061
1.071	39	1.071
1.081	40	1.081
1.091	41	1.091
1.102	42	1.102
1.114	43	1.114
1.126	44	1.126
1.139	45	1.139
1.152	46	1.152
1.165	47	1.165
1.180	48	1.180
1.195	49	1.195
0.995	50	0.954
1.009	51	0.967
1.023	52	0.980
1.037	53	0.994
1.053	54	1.009
1.068	55	1.024
1.085	56	1.040
1.102	57	1.057
1.121	58	1.074
1.140	59	1.092
1.159	60	1.111
1.180	61	1.131
1.201	62	1.151
1.224	63	1.173
1.247	64	1.195
1.271	65	1.219
1.297	66	1.243
1.324	67	1.268
1.351	68	1.295
1.380	69	1.323
1.111	70	1.352
1.136	71	1.382
1.162	72	1.414
1.189	73	1.447
1.218	74	1.481
1.247	75	1.517
1.278	76	1.555
1.311	77	1.594
1.345	78	1.636
1.380	79	1.679
1.417	80	1.724
1.456	81	1.771
1.496	82	1.820
1.539	83	1.872
1.584	84	1.926
1.630	85	1.983
1.679	86	2.043
1.730	87	2.105
1.784	88	2.170
1.841	89	2.239