



GRENADE THROW (LSW)

Yearly age
coefficients

Grenade throw **regulations** can be found at:

<http://www.joomla.lsw-spezialsport.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
$k = A \cdot e^{(-0,058)+0,00001175 \cdot m^{2,5}}$	$k = A \cdot e^{(-0,0735)+0,00001496 \cdot m^{2,5}}$
when $m \leq 59$, then $A=1.0000$, when $m \geq 60$, then $A=0.9050$.	For all groups $A=1.0000$.

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
1.005	31	1.007
1.010	32	1.013
1.016	33	1.020
1.021	34	1.028
1.028	35	1.036
1.034	36	1.044
1.041	37	1.052
1.048	38	1.061
1.055	39	1.071
1.063	40	1.081
1.071	41	1.091
1.079	42	1.102
1.088	43	1.114
1.097	44	1.126
1.107	45	1.139
1.117	46	1.152
1.127	47	1.165
1.138	48	1.180
1.150	49	1.195
1.162	50	1.210
1.174	51	1.227
1.187	52	1.244
1.200	53	1.262
1.214	54	1.280
1.228	55	1.300
1.243	56	1.320
1.259	57	1.341
1.275	58	1.363
1.292	59	1.386
1.185	60	1.410
1.202	61	1.435
1.219	62	1.461
1.237	63	1.489
1.255	64	1.517
1.274	65	1.547
1.294	66	1.578
1.315	67	1.610
1.337	68	1.644
1.359	69	1.679
1.382	70	1.716
1.407	71	1.754
1.432	72	1.794
1.458	73	1.836
1.485	74	1.880
1.514	75	1.926
1.543	76	1.973
1.574	77	2.023
1.606	78	2.076
1.639	79	2.130
1.673	80	2.188
1.709	81	2.248
1.746	82	2.310
1.785	83	2.376
1.826	84	2.445
1.868	85	2.517
1.912	86	2.592
1.958	87	2.672
2.005	88	2.755
2.055	89	2.842