



HISTORICAL HAMMER THROW (LSW)

Yearly age
coefficients

Historical hammer 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
$k = A \cdot e^{(-0,06087)+0,000002246 \cdot m^3}$	$k = A \cdot e^{(-0,06087)+0,000002246 \cdot m^3}$
For all groups $A=1.0000$.	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
1.006	31	1.006
1.013	32	1.013
1.020	33	1.020
1.028	34	1.028
1.036	35	1.036
1.045	36	1.045
1.054	37	1.054
1.064	38	1.064
1.075	39	1.075
1.086	40	1.086
1.098	41	1.098
1.111	42	1.111
1.125	43	1.125
1.139	44	1.139
1.155	45	1.155
1.171	46	1.171
1.188	47	1.188
1.206	48	1.206
1.226	49	1.226
1.246	50	1.246
1.268	51	1.268
1.290	52	1.290
1.315	53	1.315
1.340	54	1.340
1.367	55	1.367
1.396	56	1.396
1.426	57	1.426
1.458	58	1.458
1.492	59	1.492
1.528	60	1.528
1.567	61	1.567
1.607	62	1.607
1.650	63	1.650
1.695	64	1.695
1.744	65	1.744
1.795	66	1.795
1.849	67	1.849
1.907	68	1.907
1.968	69	1.968
2.033	70	2.033
2.102	71	2.102
2.176	72	2.176
2.254	73	2.254
2.338	74	2.338
2.427	75	2.427
2.522	76	2.522
2.624	77	2.624
2.732	78	2.732
2.848	79	2.848
2.972	80	2.972
3.104	81	3.104
3.246	82	3.246
3.399	83	3.399
3.562	84	3.562
3.738	85	3.738
3.926	86	3.926
4.129	87	4.129
4.348	88	4.348
4.584	89	4.584