



ANCIENT DISCUS THROW (LSW)

Yearly age coefficients

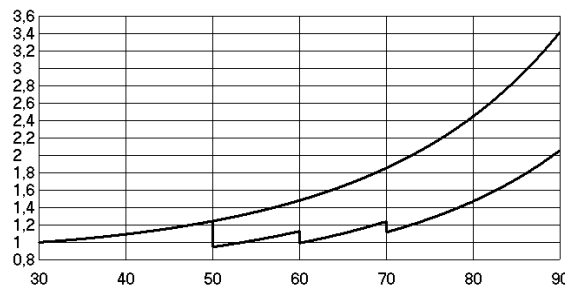
Ancient discus throw **regulations** can be found at:
<http://www.joomla.lsw-speziatsport.de/Anlagen/LSW-Wettkampfordnung.pdf>

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.

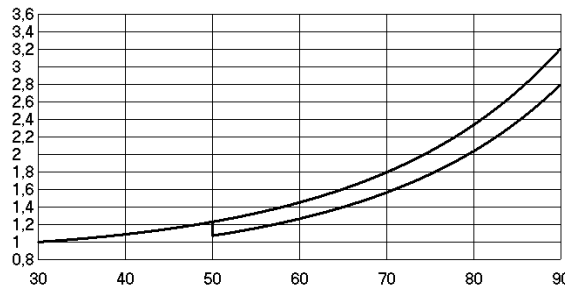
Yearly age coefficients are determined using the exponential function: $k = A \cdot e^{a+b \cdot m^n}$. In equation: k is yearly age coefficient, A is the coefficient, which evaluates the increase of result (decrease of yearly age coefficient) when the mass of shots is changing, m is the age of the athlete (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	
$k = A \cdot e^{(-0,08396)+0,00001704 \cdot m^{2,5}}$		$k = A \cdot e^{(-0,08002)+0,00001617 \cdot m^{2,5}}$	
when $m \leq 49$,	then $A=1.0000$,	when $m \leq 49$,	then $A=1.0000$,
when $50 \leq m \leq 59$,	then $A=0.7612$,	when $m \geq 50$,	then $A=0.8718$.
when $60 \leq m \leq 69$,	then $A=0.6693$,		
when $m \geq 70$,	then $A=0.6017$.		

Yearly ages coefficients curves of Ancient discus throw for men



Yearly ages coefficients curves of Ancient discus throw for women



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.

Men	Age	Women
1,000	30	1,000
1,007	31	1,007
1,015	32	1,014
1,023	33	1,021
1,031	34	1,029
1,040	35	1,038
1,050	36	1,047
1,060	37	1,056
1,070	38	1,066
1,081	39	1,076
1,093	40	1,087
1,105	41	1,099
1,117	42	1,111
1,130	43	1,123
1,144	44	1,136
1,159	45	1,150
1,174	46	1,164
1,190	47	1,179
1,207	48	1,195
1,224	49	1,211
0,946	50	1,071
0,960	51	1,087
0,976	52	1,103
0,992	53	1,120
1,008	54	1,138
1,026	55	1,157
1,044	56	1,176
1,063	57	1,197
1,083	58	1,218
1,104	59	1,240
0,990	60	1,263
1,010	61	1,288
1,031	62	1,313
1,053	63	1,339
1,076	64	1,367
1,100	65	1,396
1,125	66	1,426
1,151	67	1,458
1,179	68	1,491
1,207	69	1,526
1,113	70	1,562
1,141	71	1,599
1,171	72	1,639
1,202	73	1,680
1,235	74	1,724
1,269	75	1,769
1,305	76	1,817
1,343	77	1,867
1,382	78	1,919
1,424	79	1,973
1,467	80	2,031
1,513	81	2,091
1,562	82	2,154
1,612	83	2,220
1,665	84	2,290
1,721	85	2,363
1,780	86	2,440
1,843	87	2,520
1,908	88	2,605
1,977	89	2,694



Author of yearly age coefficients – dr. Kęstutis Vislavičius