

Triple Jump Challenge!

The triple jump consists of a three part movement - a hop, then a step, then a jump. Various texts on triple jumping techniques propose that the ideal ratio for the triple jump (hop : step : jump) is 10:9:8.

Warmup

If the current world record of 18.29 metres, set on August 7 1995 by Johnathan Edwards from England, had this ratio, how long was each of the parts?

Challenge

The table below shows some information about world record triple jumps. Unfortunately, some of it is missing. Your task is to complete the table. You should justify your answers with calculations, properly set out.

Athlete	Year	Hop Distance (m)	Step Distance (m)	Jump Distance (m)	Ratio	Total Distance (m)
Da Silva (Brazil)	1955	6.27	4.98	5.31	38% : 30% : _____	
Ryakhovskiy (U.S.S.R.)	1958	6.46	4.96		39% : 30% : 31%	16.57
Fyedoseyev (U.S.S.R.)	1959	6.50	4.82	5.38	_____ : 29% : 32%	
Schmidt (Poland)	1960	6.00		6.01	35% : 29% : 35%	
Saneyev (U.S.S.R.)	1968		5.05		36% : 29% : 35%	17.39
Saneyev (U.S.S.R.)	1972	6.50		6.01	37% : _____ : _____	17.44
de Oliveira (Brazil)	1975			6.43	_____ : _____ : 36%	