



*This brainteaser was written by Derrick Niederman.*

Two bowlers play a game against each other. The first player rolls a strike in the first frame, a spare in the second frame, and then alternately throws strikes and spares the rest of the game. The second player doesn't throw a single strike. The first player wins, of course, but what is the smallest possible margin of victory under these circumstances?



**Solution: 10 pins.**

A game in which a player alternates strikes and spares is known as a Dutch 200 game. As this name implies, the total score for such a game is 200.

A game in which a player throws no strikes reaches a maximum of 190, if a spare is thrown in each of the first ten frames and a nine is thrown in the first half of each frame and with the bonus ball in the tenth frame. Each frame earns 19 pins, and the total score for the entire game is 190.

The sample score sheet below shows how these total scores result. For the Dutch 200 bowler, notice that the number of pins scored on the first ball in each of the even frames has no effect on the total score. The bowler with no strikes, however, needs to get nine pins on the first ball in every frame to obtain the maximum possible score of 190.

Player	1	2	3	4	5	6	7	8	9	10
Spares & Strikes	ⓧ	8	ⓧ	1	ⓧ	9	ⓧ	4	ⓧ	7
	20	40	60	80	100	120	140	160	180	200
No Strikes	9	9	9	9	9	9	9	9	9	9
	19	38	57	76	95	114	133	152	171	190