So here's the question. Which horse has ran in the Kentucky Derby and came in second in time to Secretariat, Sham or Monarchos.

Well, after many arduous hours of calculation and number crunching using the WiseGuy algorithm inside of the ROD Handicapping software, I come up with my theoretical answer to who ran Second Fastest at the Kentucky Derby.

Theoretical only because who knows how accurate the timers, the clockers, the rail support distances, the split times, and everything else in the technical aspects of the debate. But here is my take and the numbers I used.

First I converted everything to tenths of a second instead of fifths hoping to take the variables to hundredths on some data.

Known variables

- 10' lengths
- 10' rail support to support – 2' safety setback from rail
- 6600 total feet of track

Track timers set at these mile fractions;

1/4	1/2	3/4	1	1 1/4

Secretariat split times

25.2	24	23.8	23.4	23
	49.200	73.000	96.400	119.400

Lengths completed per second - LCS

Time of each LCS

5.238	5.500	5.546	5.641	5.739
1.048	1.100	1.109	1.128	1.148

Sham split times

25.2	24.0	23.8	23.4	23.4
			96.400	119.800

Note:

Sham and Secretariat were running head to head after a mile

Sham actually finished 2 lengths back, not 2.5.

Time span for final LCS = lengths span of 11.478'

Support rail at 10'increments with 2' safety setback

Amount of actual true lengths based on time

Length measurement

126	120	119	117	115
10.476	11.000	11.092	11.282	11.478

Note

As Secretariat drew closer to the wire, his length time increased equaling a precise deceleration and loss of acceleration rate.

Big Red was virtually becoming longer in distance and slower in time.

Finishing times

Secretariat   119.4 seconds or 1.990 minutes

Monarchos   119.8 seconds or 1.996 minutes

Sham   119.8 seconds or 1.996 minutes

Dead Heat for Second