

## Using Speed and Pace Figures and Class Ratings

### Class Ratings

Class ratings are based on projected finishing times based on the Speed Figures of the individual horses coming into each race. Our research showed us how to take the last six months of speed figures from all of the entrants in a race, and make the best possible predication as to the winning time. So a \$25,000 claiming race could have a class rating of 88 today and then the next week an 84 should the horses change to a particularly weak field, or a 92 with a particularly strong field. The new, more powerful class ratings are best described as a relative rating for a given field of horses in a given race at a given track.

### Speed Figures

TrackMaster utilizes Speed Figures which are calculated in three basic steps. First, a "raw" figure is computed using the actual race time and a complex formula. Second, the "raw" figure is adjusted by the appropriate calculated track variant which is specific to a track, distance and surface. Finally, the adjusted figure is further adjusted by the daily track variant (DTV). The DTV is computed using a proprietary formula which computes the difference (or deviation) between the winning times at a specific track and the appropriate par times, for each racing day. There can be multiple DTVs on a given day if conditions change sufficiently through the day to affect the underlying condition of the track.

### Class Ratings and Speed Figures Working Together

If the class rating of a previous race was an 80 and a given horse from that race ran a Speed Figure of 75, TrackMaster infers that the horse finished 5 rating points off of par, after all adjustments have been taken into account. To put things into perspective, a point is equal to about 1/10 of a second at a one mile race. For simplicity, you can think of one rating point as a length.

### Horses Moving Up in Class

Let us say you saw the following horses entered today in a class 80 race:

Horse	Last Race	2nd Race Back	3rd Race Back
	CR/SR	CR/SR	CR/SR
A	80/74	80/75	79/75
B	78/81	78/80	78/79

Assuming all other factors equal, the decision comes down to class and speed. The issue in this race: Can the B horse successfully move up two notches in class (from a recent 78 to an 80) to defeat the A horse that has been racing competitively in 80 class company. The power of the speed and class relationship becomes apparent in this example. In its last two outings, the B horse has achieved an Speed Figure that is equal to or higher than the class entered today. Therefore, it has achieved the "par" time of the 80 class today. Given this achievement, combined with the better absolute speed figures over the last three races by a significant margin, the B horse has an excellent chance to defeat the A horse. Of course, the betting strategy would be odds dependant, but if these are the only two contenders, there is a good chance the price on the B horse will be more attractive than the A horse, making this a great wagering opportunity.

### Horses Moving Down in Class

Let us say you saw the following horses entered today in a class 70 race:

Horse	Last Race	2nd Race Back	3rd Race Back
	CR/SR	CR/SR	CR/SR
A	74/36	75/37	75/40
B	70/62	70/63	70/62

Assuming all other factors equal, the decision in this race comes down to the relevance of the big class drop of the A horse, and whether this class drop is enough to overcome the obvious speed advantage of the B horse. The power of the speed and class relationship is once again apparent in this example. While the A horse was entered in class 74 and 75 races, it is hardly a class 74 or 75 horse. Its Speed Figures are so far off the class rating (so far below par), one can conclude that it has not yet found its class. Is it possible that class 70 is its class? It is possible, but in all likelihood, such a class drop will entice a lot of action, and the horse will go off at a short price. Remember, a horse entered in a given class does not make the horse that class of horse. It must race somewhat competitively to be considered of that class. Trainers will occasionally enter horses in

claiming races above the horse's ability to get work (with poor speed figures resulting) at no risk of being claimed. These horses can win after the big class drop. However, as illustrated above, one can identify class droppers with little chance to win by using the speed and class together.

### Class Ratings In 2 And 3 Year Old Races

Special caution must be used with class ratings in 2 year old and 3 year old races. Since class ratings are based on par times, they rise as the ages of horses do since the par times improve. We adjust for 2 and 3 year old races depending on when they are run during the year. An example can help explain the effects.

A \$20,000 claiming race for 3 year olds run in February would have a class rating of 81. The same race run in November would have a class rating of 84. On average, 3 year olds will run 3 rating points (0.6 seconds at a mile) faster after they age 9 months. While the class ratings are accurate reflections of the par times, they can present a problem when horses are laid off as the following example illustrates:

Horse	Last Race	2nd Race Back	3rd Race Back
	CR/SR	CR/SR	CR/SR
A	81/78	81/77	81/78
B	84/79	83/78	83/77

Assuming today's race is for 3 year olds and rated as a class 84 event, it would appear that the B horse has a big edge in class and a slight edge in speed. However, it could be that the races were run on the following dates:

Horse	Last Race	2nd Race Back	3rd Race Back
A	MARCH	FEBRUARY	JANUARY
B	OCTOBER	SEPTEMBER	AUGUST

The A horse's "aging" would de facto put it in a higher class. The long layoff aside, the A horse had been running 3-4 rating points below par while the B horse has been running 5 below par. Given the way the class ratings and pars work, the A horse is not really moving "up" in class based on ability; only moving "up" as a result of aging.

### Pace Style And Figures

Pace styles are a relative mathematical average of where a horse has raced historically at different points of call. TrackMaster estimates positions at the early call, middle call, and race finish to let you know where that horse usually is at those stages of the race. These calculations allow handicappers to identify a horse's particular racing style, whether it be early speed, maintained, or late closing speed.

Horse	Early	Mid	Fin	#R
	3.5	3.2	2.9	10

At the early call, the horse has been averaging 3.5. This figure means that the horse has been racing between third and fourth position at this point of call. At the middle point a figure of 3.2 means typically between third and fourth, but a little closer to third. He then winds up at the finish with a 2.9, or just about third. To demonstrate how these figures are computed, an example will help. If a horse raced in three races, and he was third (3) at the middle call in one, second (2) in the next, and fifth (5) in the last, his position would be  $(3 + 2 + 5) / 3$ , or 3.3 at the middle call. TrackMaster then adds adjustments for the field size and change from one distance to another. For example, a horse racing third in a twelve-horse field is given more front credit than a horse racing third in a five-horse field. Furthermore, a sprinter who has been running third at the early call will be given more front-running credit than a router running third.

TrackMaster analyzes a horse's pace figures at the same calls in four ways. This unique style of presenting pace figures is based on the fact that horses are creatures of habit and once a horse develops a particular style of racing (i.e. early speed, stalking or pressing the pace, off the pace or closing speed) he will continue to demonstrate that style throughout his racing career.

- All races (sprints/routes) on today's surface
- Races at today's distance/surface within a half furlong of today's distance
- Sprint races (less than a mile)
- Route races (mile or farther)

	Early	Mid	Fin	#R
Horse	75	77	82	5

Late speed horses will display low figures at the early call. Even though their final number may be higher than the early and middle figures, you must respect horses with this type of speed, especially on a race track that favors that style. Pace figures for horses who typically lag back early and save themselves for one late burst in the stretch will appear in the middle or bottom of the early column and then continue to move up through the middle and finish columns. The #R represents the number of races (up to maximum of 5) used to calculate the pace figures. The greater the #R the more confident you can be that these figures will be an accurate predictor of where the horse is likely to be. If an asterisk (\*) precedes the number of races, the races used for the pace style calculation were run on a surface opposite from today's surface. Our data will use the history of the opposite surface if this horse has no past performance information on today's surface.