The Rules of the Racing Line

- The ideal apex is determined by a car's lateral vs longitudinal acceleration capabilities for a given corner. As a car's ability to accelerate in relation to its cornering ability increases, it will need a later, slower apex.
- The apex should be the most limiting point along the inside of the track and also the point of minimum speed attained in the corner. Nearly every vehicle should have a corner entry path up to this apex in the shape of an Euler Spiral.
- The braking point does not affect the ideal corner entry path. Depending on the needed deceleration point, a driver may begin with straight-line braking prior to entering the spiral or they may continue into the spiral at full-throttle before switching to deceleration. If a driver enters the spiral at full-throttle however, they shouldn't reach the limit until they begin decelerating.
- A car should either achieve full throttle at the apex or, if this is impossible due to wheelspin, not until the car is going nearly straight at the end of the corner. In the event of wheelspin, progressive power should be applied throughout corner exit. Progressive power doesn't necessarily mean progressive throttle however, it depends on the shape of the car's power band.
- While being as close to neutrally balanced as possible, a car should be at the understeer limit during corner entry, and the oversteer limit during corner exit. While these are the ideal states, they are not always possible unless a car's setup is optimized for a certain corner. A full throttle exit, for example, will often be at the understeer limit, but a driver shouldn't consider this an error and try to induce oversteer to correct.
- A Standard Corner racing line should typically take up the entire width of the track, and a driver can use this to determine their ideal apex. There are rare exceptions, which we'll cover in a later rule, but if a driver doesn't need the entire width of the track during corner exit, they should use an earlier, faster apex. Likewise, if the driver runs wide at corner exit, this doesn't mean they need to apply less throttle, it means they need a later, slower apex.
- The ideal chicane transition point requires immediate deceleration as the steering passes over center toward the 2nd apex. This links the two apexes, so if a driver needs a **later** 2nd apex to optimize the final corner exit, they should drive a **later** 1st apex… and vice versa.
- To optimize a double apex, a driver should avoid a speed reversal between the two apexes. This links the two apexes, so if a driver needs a **later** 2nd apex to optimize the corner exit, they should drive an **earlier** 1st apex… and vice versa.
- To optimize a Full-throttle Corner, a driver should drive the shortest path possible by setting their entry spiral to ensure the car reaches the limit just as they pass the apex. The driver should then continue at the limit, turning the vehicle until it is aimed directly at the next corner.
- Neither a driver's entry nor exit arc should exceed 90 degrees.