Taylor series is a **representation of a function** as an **infinite sum of terms** that are calculated from the function’s derivatives at a single point. If Taylor series is cantered at 0, it is known as Malclaurin series.

It is a common practise to approximate a function by using a finite number of terms of its Taylor series. Taylor theorem gives quantitative estimates of the error of its approximation. A finite number of initial terms of the Taylor series of a function is called Taylor polynomial. The Taylor series of that function is the limit of that Taylor polynomial provided that limit exist.

The more you increase the degree of the Taylor’s polynomial, the more it hugs the curve.



The result

