

## 4.) Asymptotes

How to determine asymptote or asymptotes?

i.) In order to obtain the asymptote parallel to the axis of  $x$ , equate to zero the co-efficient of highest power of  $x$ . For example, if the curve be of the  $n$ th degree and the terms containing  $x^n$  be absent, then the co-efficient of  $x^{n-1}$  equated to zero will give the asymptote parallel to the axis of  $x$ .

ii.) If both the terms containing  $x^n$  and  $x^{n-1}$  be absent, then

the co-efficient of  $x^{n-2}$  equated to zero will give two asymptotes parallel to the axis of  $x$ .

2) To get the asymptotes parallel to the axis of  $y$ , equate to zero the co-efficient of the highest power of  $y$ . For example, if the curve be of the  $n$ th degree and the term containing  $y^n$  be absent, then the co-efficients of  $y^{n-2}$  equated to zero will give two asymptotes parallel to the axis of  $y$ .