

01/04/2023 Notes

Leading term has the highest degree  $x$  value and that gives you the degree of the polynomial not leading coefficient

Leading coefficient and degree of polynomial tells us the global behavior

Even degree makes both sides of the graph go the same  $y$  direction

Odd degree makes both sides of the graph go to opposite  $y$

If positive leading coef. it will follow the root graph ↗

If negative leading coef. it will follow the opposite ↘

To find  $y$  intercept set  $x = 0$  and solve

To find  $x$  intercepts set  $y = 0$  and solve, then make sure the answer is valid

Multiplicity of a root is the degree of that given factor

If the multiplicity of a root is even, it touches but doesn't pass through the axis, if it is odd however it passes

The roots follow the toolkit function of its multiplicity