

Q2.

Test Case:

20

0.051 0.687

0.073 0.983

0.089 0.857

0.798 9.997

0.943 18.345

0.684 6.233

0.132 0.994

0.723 6.805

0.11 0.845

0.117 1.278

0.641 4.622

0.329 1.633

0.654 5.462

0.749 7.621

0.583 4.249

0.74 7.61

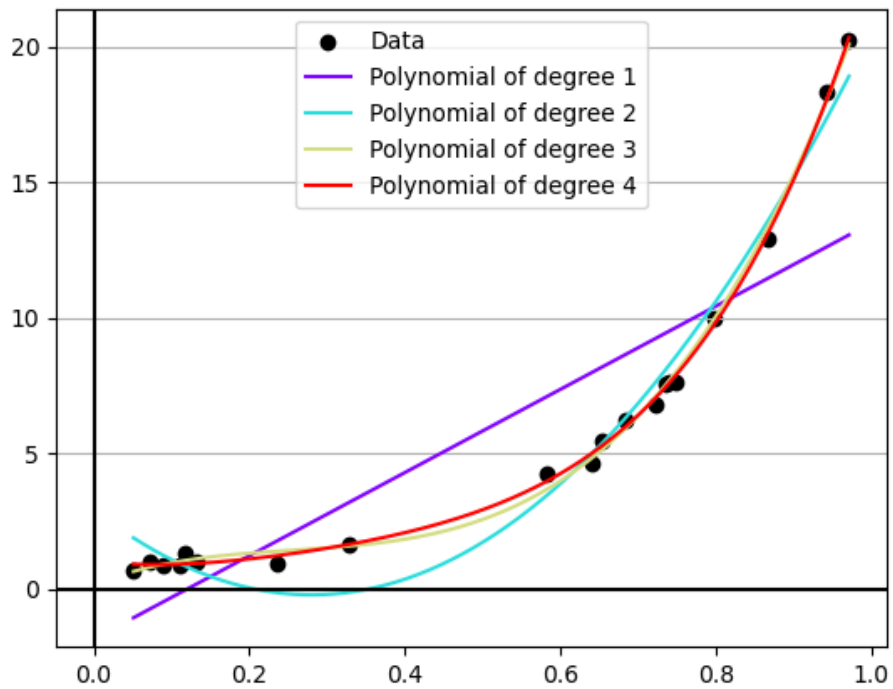
0.235 0.935

0.735 7.564

0.971 20.224

0.867 12.94

Plot:



Output:

1st degree polynomial coefficients: [-1.85958929, 15.36343758]

R Sq: 0.7610513101934243

2nd degree polynomial coefficients: [2.91700732, -22.46579925, 40.10932159]

R Sq: 0.9796651007302987

3rd degree polynomial coefficients: [0.15496602, 11.19229963, -36.58522234, 47.59647586]

R Sq: 0.9977237367505463

4th degree polynomial coefficients: [1.02708171, -3.7440074, 28.95921749, -52.38339034, 49.05564669]

R Sq: 0.9985431721039795