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Problem1_writeup

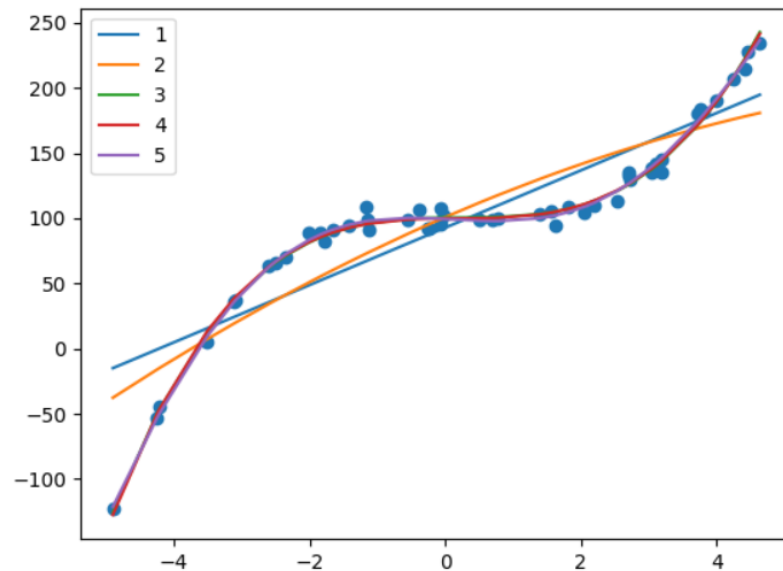
$$Y1 = 21.99190792x + 92.70531403$$

$$Y2 = -1.15834068x^2 + 22.60822925x + 100.79905593$$

$$Y3 = 1.66680649x^3 + -1.19334469x^2 + 0.39581103x + 100.43721865$$

$$Y4 = -1.43365571e-02x^4 + 1.66770942x^3 + -0.905694362x^2 + 0.339499592x + 99.7620446$$

$$Y5 = -2.31737037e-02x^5 + -1.96196620e-02x^4 + 2.27429003x^3 + -0.864397166x^2 + -2.65996605x + 99.4138526$$



This data follows a 5th order degree polynomial (Y4) and becomes obvious when the estimated regression lines as you can see the dots very accurately following the purple line outputted by the program.