Matrix Computations MA423 Lab 04

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Ques.**1**

```
% Taking a sample input
p = [1, 2, 4];
x = [0, -1, -2];

disp(Horner(p, x));
```

```
Question 1
     4     3     4
```

Ques.**2**

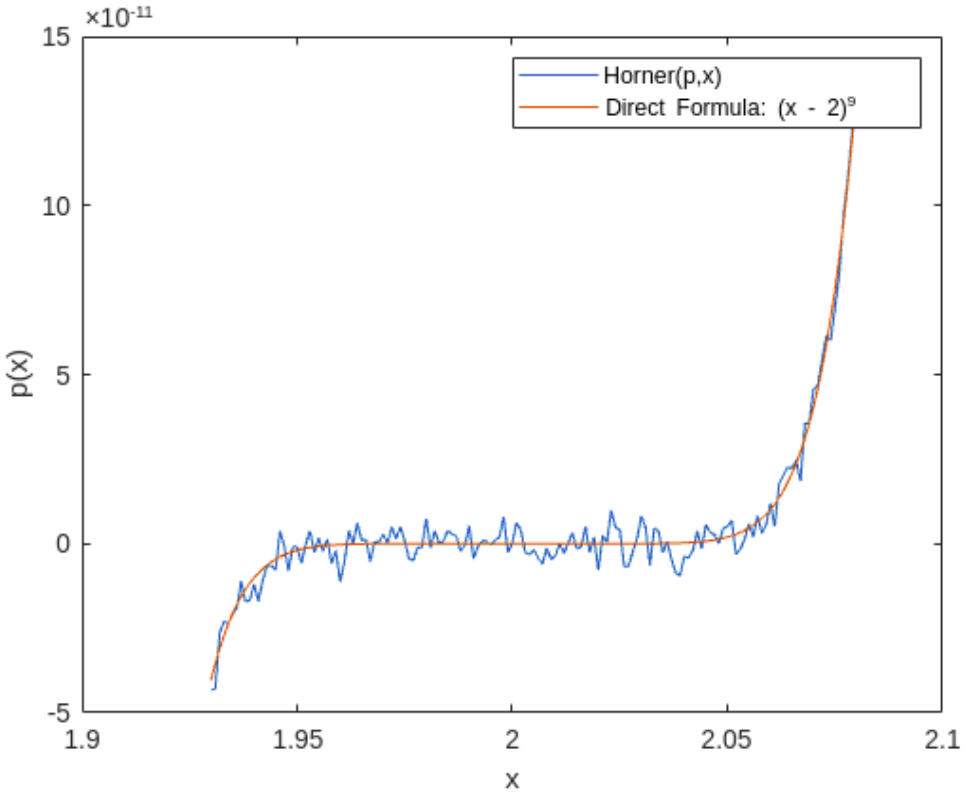
- The interval is taken: **[1.97, 2.04].**
- Solution Obtained:

```
Question 2

2.005000
```

- Hence it can be seen that the **bisection method** is giving a solution for the equation (x-2)^9 which is 2.00500 which is not equal to 2.

Ques.**3**



- The rounding errors generated while evaluating p(x) using Horner's method leads to some errors pushing very small negative p(x) values to the positive side and other positive values to the negative side in the close region of 2. That's why the graph computationally crosses the x-axis many times other than 2.