Assignment-4

SECTION-2

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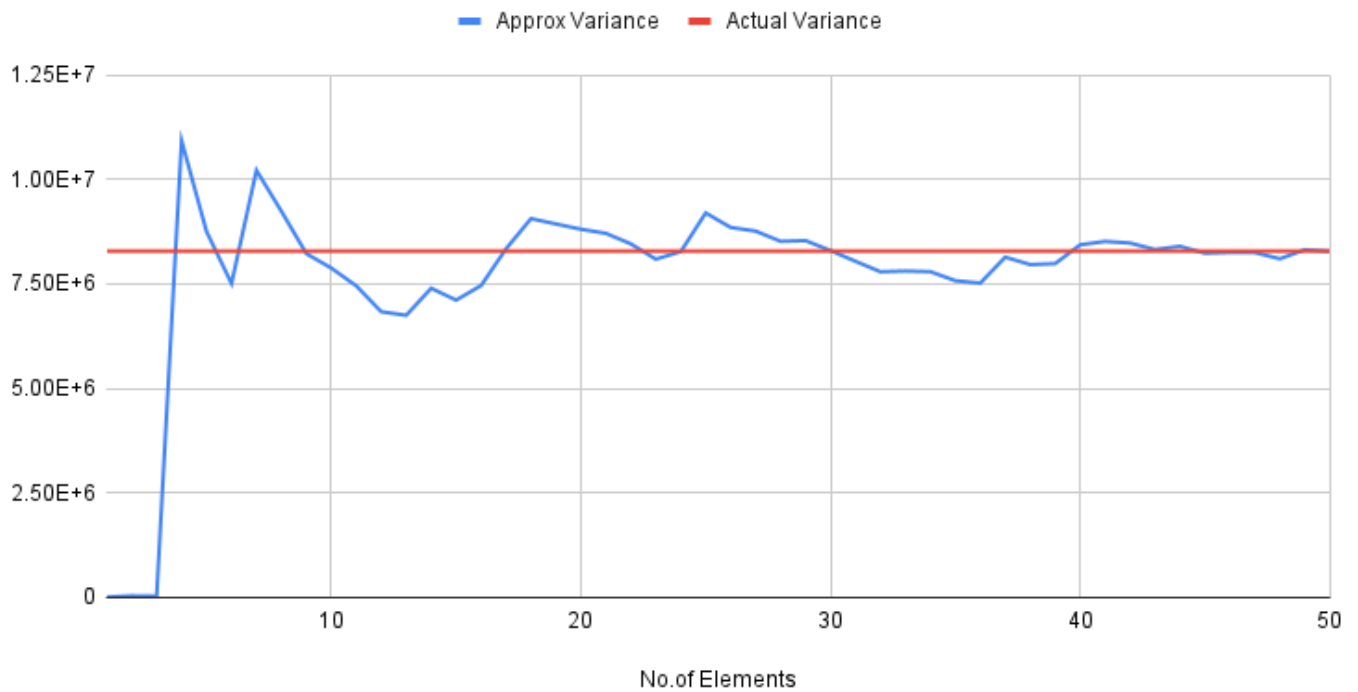**Question_4(b)_Approximate Variance Vs Actual Variance**

No.of Elements	Approx Variance	Actual Variance
1	0	8283502.778
2	28900	8283502.778
3	20834.66667	8283502.778
4	10928433.69	8283502.778
5	8751046.16	8283502.778
6	7508789.139	8283502.778
7	10218947.84	8283502.778
8	9236780.25	8283502.778
9	8224028.889	8283502.778
10	7877174.16	8283502.778
11	7451676.926	8283502.778
12	6832259.972	8283502.778
13	6747593.822	8283502.778
14	7394673.265	8283502.778
15	7111178.649	8283502.778
16	7459568.871	8283502.778
17	8341140.678	8283502.778

18	9062722.645	8283502.778
19	8934642.787	8283502.778
20	8808283.06	8283502.778
21	8710164.331	8283502.778
22	8457960.085	8283502.778
23	8091727.607	8283502.778
24	8272947.66	8283502.778
25	9199331.68	8283502.778
26	8850689.694	8283502.778
27	8764133.583	8283502.778
28	8518101.276	8283502.778
29	8536064.302	8283502.778
30	8297373.166	8283502.778
31	8040993.003	8283502.778
32	7789723.655	8283502.778
33	7808012.591	8283502.778
34	7792545.011	8283502.778
35	7575991.368	8283502.778
36	7518513.583	8283502.778
37	8140019.937	8283502.778
38	7961899.77	8283502.778
39	7984339.615	8283502.778
40	8435582.594	8283502.778
41	8516713.518	8283502.778
42	8477956.181	8283502.778
43	8323817.295	8283502.778
44	8399345.267	8283502.778
45	8234171.404	8283502.778
46	8252239.346	8283502.778
47	8250096.758	8283502.778

48	8101073.281	8283502.778
49	8317069.297	8283502.778
50	8283502.778	8283502.778

Approx Variance and Actual Variance

Thus from the Above Graph we can conclude that:

The value of **Approximate Variance** approaches the **Actual Variance** as we read more data and after reading the last element we get

Approximate Variance = Actual Variance