

Logan Miles

HW 4

1.6.2 1) For $N=0$: $\frac{1}{\pi} \frac{2\sqrt{2}}{9901} \sum_{k=0}^{\infty} \frac{(4(0))! (1103 + 26390(0))}{(0!)^4 396^0} = \frac{2\sqrt{2}}{9901} (1103)$

For $N=1$: $\frac{1}{\pi} \frac{2\sqrt{2}}{9901} \sum_{k=0}^{\infty} \frac{(4(1))! (1103 + 26390(1))}{(1!)^4 396^1} = \frac{2\sqrt{2}}{9901} (1103 + \frac{26390}{396})$

5.4 1) y will be equal to 1000 after the completion of the nested loop because y is only incremented forward when $i=j$ in the range 0 to 999, and there are 1000 such combos.

11.7 1) $\begin{pmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & 0 \\ 0 & 0 & 0 & 1 \end{pmatrix} \begin{pmatrix} R_1 \\ R_2 \\ R_3 \\ R_4 \end{pmatrix} \rightarrow \begin{pmatrix} R_1 \\ R_2 \\ R_3 \\ R_4 \end{pmatrix}$

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