

```
main.py
84     return y1 + y2
85
86 # --- Compute ALL Solutions ---
87 y_shooting = shooting_method(x)
88 y_fd = finite_difference(x)
89 y_var = variational_method(x)
90
91 # --- Print Results in Table Format ---
92 print(f'{x':>5} | {'Shooting':>10} | {'Finite Diff':>12} | {'Variational':>12}")
93 print("-" * 50)
94 for i in range(len(x)):
95     print(f'{x[i]:5.1f} | {y_shooting[i]:10.6f} | {y_fd[i]:12.6f} | {y_var[i]:12.6f}")
96
```

input

x	Shooting	Finite Diff	Variational
0.0	1.000000	1.000000	1.000000
0.1	1.016634	1.016532	1.021619
0.2	1.059210	1.059102	1.054149
0.3	1.124314	1.124251	1.100370
0.4	1.209024	1.208890	1.160598
0.5	1.310524	1.310313	1.239047
0.6	1.426232	1.426194	1.339016
0.7	1.554455	1.554570	1.460520
0.8	1.693764	1.693822	1.608204
0.9	1.842715	1.842642	1.790175
1.0	2.000000	2.000000	2.000000