(c1)

In[87]:=
```
M = 1
L = 10
V0 = .01
ħ = 1
Plot[{Sqrt[2/L] * Sin[π * x / L],
 Sqrt[2/L] * Sin[π * x / L] + (M * V0 * L^2)/(2 * ħ^2 * π^2) Sqrt[2/L] * Sin[3 * π * x / L]}, {x, 0, L}]
```

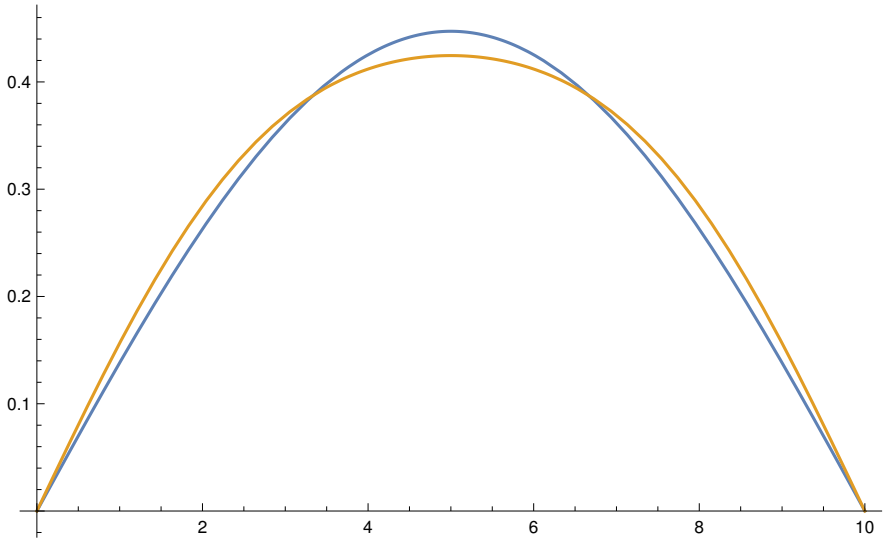
Out[87]= 1

Out[88]= 10

Out[89]= 0.01

Out[90]= 1

Out[91]=



Thus we see for a small perturbation (i.e. small V0 compared to size of well), the correction is slight.

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