

**AME 30314
EXAMINATION 2
TAKE-HOME PROBLEM**

Problem 5. (20 points)

A steady-state heat balance for a rod can be represented as,

$$\frac{d^2T}{dx^2} - 0.15 T = 0$$

with $T(0) = 240$ and $T(10) = 150$. Use the shooting method to obtain (and plot) the temperature distribution $T(x)$ in the bar.