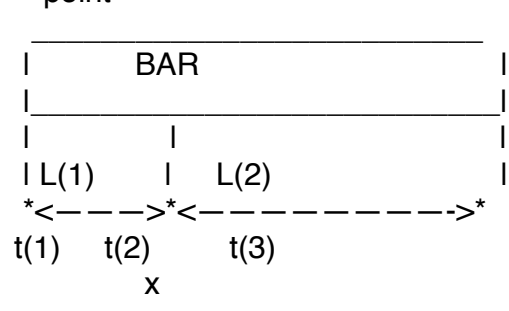
# MES_1D

Subject: DETERMINATION OF A FIXED TEMPERATURE FIELD IN A BAR

Task 1 Calculate the temperature value in nodes of the finite element mesh for the problem of fixed heat charge in a bar (Fig. 2). The following output data were adopted:
k = 50 W / mK,
α = 10 W / m^2K,
S = 2 m2,
L = 5 m,
L (1) = 2.5 m,
L (2) = 2.5 m,
q = - 150 W / m^2,
t∞ = 400 K

Legends:
L Lenght
t Temperature
t∞ Ambient temperature
q Heat flux density
α Convective heat factor
S Cross-sectional area
k Thermal conductivity coefficient

fig.2



*---------->

solving the accounting task in the main.cpp file