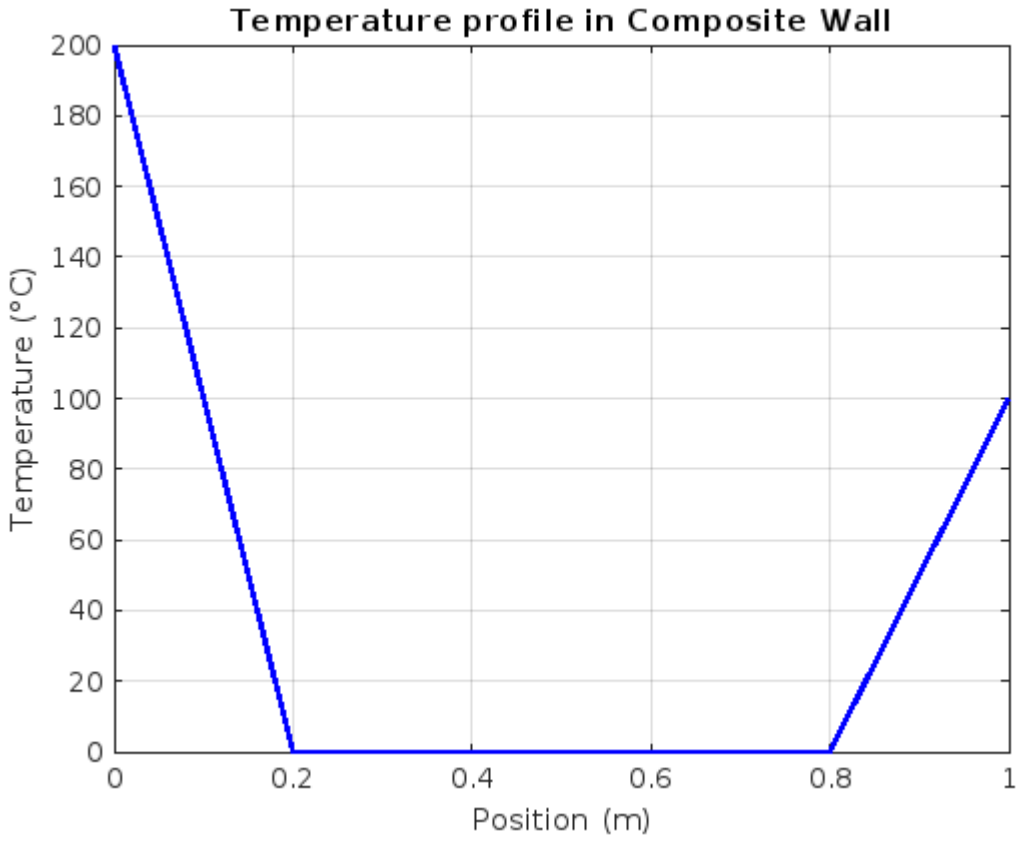
```
clc
% inputs
q = 366000;
k = 366;
xlength = 1;
m = 5;

delta_x = xlength/m;
Tend1 = 100;
Tend2 = 1000;
Tmax = max ([Tend1,Tend2]);

% Exact analytical solution
n = m - 1;
x(1) = 0;

for i = 2:n+1
    x(i) = x(1) + (i-1) * delta_x;
    Texact(i-1) = -1000*(1/2)*x(i)^2 + 1400*x(i) + 100;
end

Texact
% Boundary conditions
T(1) = 100;
T(end) = 200;

% Loop through each element
for i = 1:m
    q_element = q * dx;

    T(i) = T(i) + q_element / (2 * k);
    T(i+1) = T(i+1) - q_element / (2 * k);
end

% Plotting
plot(x, T, 'b', 'LineWidth', 2);
xlabel('Position (m)');
ylabel('Temperature (°C)');
title('Temperature profile in Composite Wall');
grid on;
```

```
Texact =

   360   580   760   900
```



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