

```
dx = 0.1
```

```
dx = 0.1000
```

```
L = 1
```

```
L = 1
```

```
x = 0:dx:L
```

```
x = 1x11  
    0    0.1000    0.2000    0.3000    0.4000    0.5000    0.6000    0.7000 ...
```

```
A = zeros(length(x)-2);  
A = A + diag(-2 * ones(1, length(A)));  
A = A + diag(ones(1, length(A) - 1), 1);  
A = A + diag(ones(1, length(A) - 1), -1)
```

```
A = 9x9  
   -2    1    0    0    0    0    0    0    0  
    1   -2    1    0    0    0    0    0    0  
    0    1   -2    1    0    0    0    0    0  
    0    0    1   -2    1    0    0    0    0  
    0    0    0    1   -2    1    0    0    0  
    0    0    0    0    1   -2    1    0    0  
    0    0    0    0    0    1   -2    1    0  
    0    0    0    0    0    0    1   -2    1  
    0    0    0    0    0    0    0    1   -2
```

```
C = -1.96e-7 * ones(length(A), 1);  
C(1) = C(1) - 20;  
C(end) = C(end) - 30
```

```
C = 9x1  
-20.0000  
-0.0000  
-0.0000  
-0.0000  
-0.0000  
-0.0000  
-0.0000  
-0.0000  
-0.0000  
-30.0000
```

```
T = A \ C
```

```
T = 9x1  
21.0000  
22.0000  
23.0000  
24.0000  
25.0000  
26.0000  
27.0000  
28.0000
```

29.0000