```
clc;
function T=TempDist(E)
E(1)=80;
E(2)=120;
E(3)=150;

EMat1=[E(1)+E(2)];
EMat2=[E(1)];
EMat3=[E(1)+E(3)];
EMat4=[E(1)+E(3)];
EMat5=[E(1)];
EMat6=[E(1)+E(2)];
Coeff1=[4 -1 0 0 0 -1];
Coeff2=[-1 4 -1 0 -1 0];
Coeff3=[0 -1 4 -1 0 0];
Coeff4=[0 0 -1 4 -1 0];
Coeff5=[0 -1 0 -1 4 -1];
Coeff6=[-1 0 0 0 -1 4];
T1=Coeff1\EMat1;
T2=Coeff2\EMat2;
T3=Coeff3\EMat3;
T4=Coeff4\EMat4;
T5=Coeff5\EMat5;
T6=Coeff6\EMat6;
fprintf('The node temperatures are T1 = %5f, T2 = %5f, T3 = %5f, T4 = %5f, T5 = %5f, T6 = %5f\n' ,T1,T2,T3,T4, T5, T6);
end
```

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