```
% Supreeth Rao 1MS19EE057 Experiment 7
% Optimal Generator Scheduling for Thermal Power Plant

clc;
clear;

alpha = [  500;   400;    200];
beta  = [  5.3;   5.5;    5.8];
gamma = [0.004; 0.006;  0.009];
PD=800;
delp=1;
lamada=5;

fprintf("Lamada \t\t p1 \t p2 \t p3 \t \tDp \tgrad \t Delamada\n")
disp('==========================================================================')

iter=0;
while abs(delp)>=0.001
   iter=iter+1;
    p=(lamada-beta)./(2*gamma);
    delp=PD-sum(p);
    j= sum(ones(length(gamma),1)./(2*gamma));
    Delamada=delp/j;
    disp([lamada,p(1),p(2),p(3),delp,j,Delamada])
    lamada=lamada+Delamada;
end
totalcost = sum(alpha+beta.*p+gamma.*p.^2)
```

```
Lamada           p1      p2      p3             Dp      grad     Delamada
==========================================================================
    5.0000  -37.5000  -41.6667  -44.4444  923.6111  263.8889    3.5000

    8.5000  400.0000  250.0000  150.0000         0  263.8889         0


totalcost =

   6.6825e+03
```

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