```
clc
syms f(x)
f(x)=x*(12-2*x)*(12-2*x)
df=diff(f,x)
cv=solve(df,x)
d2f=diff(df,x)
for i=1:length(cv)
    d2fval=subs(d2f,x,cv(i))
    if d2fval<0
        fprintf('%f is a point of maximum\n',cv(i))
    elseif d2fval>0
            fprintf('%f is a point of minimum\n',cv(i))
    else
        fprintf('%test is not a conclusive\n')
    end
end
```

```
f(x) =

x*(2*x - 12)^2


df(x) =

x*(8*x - 48) + (2*x - 12)^2


cv =

2
6


d2f(x) =

24*x - 96


d2fval(x) =

-48

2.000000 is a point of maximum

d2fval(x) =

48

6.000000 is a point of minimum
```

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