Newton Raphson

```
> te<-function(x){(x-2)^2-6*(x-2)}
> dte<-function(x){2*(x-2)-6}
> curve(te,4,10)
> abline(h=0,col="gray")
> curve(dte,4,10,add=TRUE,col="grey")
> x0<-6
> dif<-.1
> while(dif>0.0001){
+ xnva<-x0-te(x0)/dte(x0)
+ dif<-abs(x0-xnva)
+ x0<-xnva
+ cat("dif=",dif,"x=",xnva,"t(x)=",te(xnva),fill=TRUE)
+ }
dif= 4 x= 10 t(x)= 16
dif= 1.6 x= 8.4 t(x)= 2.56
dif= 0.3764706 x= 8.023529 t(x)= 0.1417301
dif= 0.02343786 x= 8.000092 t(x)= 0.0005493332
dif= 9.155273e-05 x= 8 t(x)= 8.381903e-09
```