# 164hw2

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```r
G<-function(init, func){
  i<-1
  old<-init
  for (i in 1:10) {
    new<-old
    old<-new-0.7*func(new)
    cat(i,".","<",old,">","\n")
  }
}
x<-matrix(c(3,4,5),nrow=3)
a<-function(x){
  a<-matrix(c((x[1]-1),(0.5*(x[2]-2)),(x[3]-3)),nrow = 3)
}
G(x,a)
```

```
1 . < 1.6 3.3 3.6 >
2 . < 1.18 2.845 3.18 >
3 . < 1.054 2.54925 3.054 >
4 . < 1.0162 2.357012 3.0162 >
5 . < 1.00486 2.232058 3.00486 >
6 . < 1.001458 2.150838 3.001458 >
7 . < 1.000437 2.098045 3.000437 >
8 . < 1.000131 2.063729 3.000131 >
9 . < 1.000039 2.041424 3.000039 >
10 . < 1.000012 2.026925 3.000012 >
```