d) Write the step count table for the function

Statement	s/e	Frequency	Total steps
void mult(int a[][MAX_SIZE]....)	0	0	0
{	0	0	0
int i,j,K;	0	0	0
for(i=0;i<MAX_SIZE;i++)	1	MAX_SIZE+1	MAX_SIZE+1
for(j=0;j<MAX_SIZE;j++)	1	MAX_SIZE(MAX_SIZE+1)	$MAX\_SIZE^2+MAX\_SIZE$
{	0	0	0
c[i][j]=0;	1	MAX_SIZE x MAX_SIZE	MAX_SIZE^2
for(K=0;K<MAX_SIZE;K++)	1	$MAX\_SIZE^2(MAX\_SIZE+1)$	$MAX\_SIZE^3+MAX\_SIZE^2$
c[i][j]+=a[i][K]*b[K][j];	1	$MAX\_SIZE^2 \times MAX\_SIZE$	MAX_SIZE^3
}	0	0	0
}	0	0	0

Total: $2MAX\_SIZE^3+3MAX\_SIZE^2+2MAX\_SIZE+1$

7)
```
void transpose(int a[][MAX_SIZE])
{
  int i,j,temp;
  for(i=0;i<MAX_SIZE-1;i++)
    for(j=i+1;j<MAX_SIZE;j++)
      SWAP(a[i][j],a[j][i],temp);
}
```

a) Rewrite the program so that step counts are introduced into the function.

```
void transpose(int a[][MAX_SIZE])
{
  int i,j,temp;
  for(i=0;i<MAX_SIZE-1;i++)
  {
    count++; // for i in range [0,MAX_SIZE-2]
```