```c
#include <stdio.h>
#include <math.h>

typedef unsigned long long TFATT;
TFATT fact(TFATT);

/***************************************************************************
**/
int main(void)
{
  TFATT n;
  for(n=0;n<20;n++){
    printf(" %llu! = %llu\n",n,fact(n));
  }
}

/***************************************************************************
**/
TFATT fact(TFATT n)
{
  if (n == 0) return (1);
  return(n * fact(n-1));
}
```