HW3

Q1:

```
push    ebp
mov     ebp, esp
and     esp, 0FFFFFFF0h
sub     esp, 20h
call    ___main
mov     dword ptr [esp+1Ch], 3          // int x = 3
mov     dword ptr [esp+18h], 5          // int y = 5
mov     dword ptr [esp+14h], 0          // int z = 0
mov     eax, [esp+1Ch]                  // eax = x
imul    eax, [esp+18h]                  // eax = x * y
mov     edx, eax                        // edx = x * y
mov     eax, [esp+1Ch]                  // eax = x
mov     ecx, eax                        // ecx = x
shr     ecx, 1Fh                        // ecx = x / 2^31
add     eax, ecx                        // eax = x + x / 2^31
sar     eax, 1                          // eax = (x + x / 2^31)>>1
sub     edx, eax                        // edx = x * y - (x + x / 2^31)>>1
mov     eax, edx                        // eax =  x * y - (x + x / 2^31)>>1
mov     [esp+14h], eax                  // int z =  x * y - (x + x / 2^31)>>1
mov     eax, [esp+14h]                  // eax = z
mov     [esp+4], eax                    // temp mem for printf
mov     dword ptr [esp], offset aD ; "%d"
call    _printf                         // print value of z
mov     eax, 0
leave
retn _main                              // return 0
endp
```