Program that defines the procedure “addition” to add two numbers, passed through

stack, and return their sum.

.model small

.stack

.data

.code

Main proc

Mov ax,@data

Mov ds,ax

Mov ax,5

Mov bx,10

Push ax ;pushing value of ax, which is 5 to stack

Push bx ;pushing value of bx, which is 10 to stack

Call addition ; calling procedure

Pop bx ; removing number 10 from stack

Pop bx ; removing number 5 from stack

.exit

Main endp

Addition proc ;defining procedure

Push bp ;storing value of BP on stack so that we can restore it later

Mov bp,sp ;to access stack without pop instruction—moving TOS to bp

Mov ax,0 ;no need to push AX as it is safe to use AX register

Add ax,[bp+4] ; [bp+4] contains value 10

Add ax,[bp+6] ; [bp+6] contains value 5

Pop bp ; restoring value of BP from stack

Ret ; transferring control back to the calling procedure

Addition endp

Procedure to print pattern

.model small

.stack 100h

.data

str1 db "\*$"

str2 db 13,10, "\*\*$"

str3 db 13,10,"\*\*\*$"

str4 db 13,10,"\*\*\*\*$"

str5 db 13,10,"\*\*\*\*\*$"

.code

main proc

mov ax,@data

mov ds,ax

call print

call exit

endp

print proc

lea dx,str1

mov ah,09h

int 21h

lea dx,str2

int 21h

lea dx,str3

int 21h

lea dx,str4

int 21h

lea dx,str5

int 21h

ret

print endp

exit proc

mov ah,4ch

int 21h

ret

exit endp

end main