High-level Language Programmer's View

main:
   maxNum = 3
   maxPower = 4

CalculatePowers(maxNum, maxPower)
(*)
...
end main

CalculatePowers(In: integer numLimit, integer powerLimit)
in integer num, pow

for num := 1 to numLimit do
   for pow := 1 to powerLimit do
      print num " raised to " pow " power is " Power(num, pow)
   (**)
end for pow
end for num

end CalculatePowers

integer Power( In: integer n, integer e)
in integer result
if e = 0 then
   result = 1
else if e = 1 then
   result = n
else
   result = Power(n, e - 1) * n (***)
end if
return result
end Power

1) Trace the next execution of the recursive function Power by showing the run-time stack.

2) What is the most number of call frames on the stack at any one time for the whole program?