High-level Language Programmer’s View

**main:**
maxNum = 3
maxPower = 4

CalculatePowers(maxNum, maxPower)
(*)

end main

**CalculatePowers(In: integer numLimit,**
integer powerLimit)
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)
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?