

Pseudocode and code

1 2 2 3
3 6 7 11
h = 8

11, 10, 9, 8, 7, 6, 5, 4, 3, 2, 1

Target = 10
// Looking for 10

// somewhere in binary search
if (arrays[m] == target)
return m;

// in English

M = 15

15 will take Koko 8 hours to eat piles

8 > h

therefore M = 15 is not the answer

// 15 will take Koko 8 hours to eat piles

totalTime = 0

for p in piles:

totalTime += (p / M)

if totalTime <= h

return m

Left = max(piles) -- 11, 5

Right = 1 -- 1,

MinValue = left

while(L > R)

M = (L+R)//2 -- 6, 3, 4

// floor division rounds to the smallest number

totalTime = 0 -- 6, 10

for p in piles:

totalTime += math.ceil(p / M)

if totalTime <= h

L = M - 1

MinValue = M

if totalTime > h

R = M+1

return M

Time complexity graph:

Goal : is to find the least amount of banana's Koko can eat per hour, where she will eat all the bananas before the guards come back

Solution n (log m)

