



slow = slow.next

fast = fast.next.next

Floyd's cycle detection

algorithm

↳ Hare-tortoise algo

Two pointers approach

fast pointer → null

↳ No Loop

if (slow == fast)

↳ Loop is detected  
in linked

List

$$(-) N = S = D + K + c(i) \text{ ————— } (2)$$

$$2N = f = D + K + c(j) \text{ ————— } (1)$$

$$\underline{N = c(\underline{\underline{j-i}})}$$

$$2D + 2K + c(2i) = D + K + c(j)$$

$$D + K = c(\underline{\underline{j-2i}})$$

$$\boxed{D = c(n) - K}$$