Ratiol Hassan. Big() = Time Function = T(n) = 5 m2 + 11 + 4. Frud (ousfant =) C=? =) N=? Big 0 => f(n) < C*g(n), for n>N Solution; (1) T(n) = 5n2+n+h 5 nithth \(\lefta \) \(\frac{1}{5} n^2 + n^2 + 4 n^2 \) \(\text{multiply n}^2 - \right) 5n+n+4 = 10n -: By the equation of Big Orule =) c=10 n Z 1 = Find Big O T(n) = 2n3+n2+6n+1? find Constant (=) " =) N=59 bign Solution: (1) 213+1 +6n+12 < 213+13+6n3+12n3 mltiply 13 =) 2n3+ n3+6n+12 = 21n3 · As per Big 0 =) C=21 271 N=1/

3)

9)

9)

9)

5)

9)

3

J		Rativ Hassan.
3		
3	1	
3		
3		Big O following Code.
3		
3		
3		=) First too loop runs of (n) time so O(n)
3		50 0(n)
3		
3		
3		=> Serond nested for loop runs for i and j so we knownested loop => nxn=n²
		so me knownested loop =) nxn=n2
3		
3		11 \ 2121
3		=) tello runs one operation =) O(1)
3		
3		: (forst 100p) -> O(n)
	-	(10.3, 1004)
3		(Second (OOD) 1x7
3		$n \times n = n^2 O(n^2)$
3		H19110 - 014
3		(Second (DOD) ixj' NXN=n² O(n²) +1ello — O(n²) i. Big O is O(n²) for nested Dops running Hello.
3		
3		for nested loops running flello.
3		
3		
3		
3		
-		
-		
-		
-		
	-	
	-	
7		