	T.
	per de la company de la compan
0-) 1	for(i=0; icn; (++)
3 2	for (J=0; J <i; j++)<="" th=""></i;>
	Stot;
	Section 1980 Secti
Son	No. Of times executed.
lnih	al 0 (x) 0
	0 0
1.614	THE FEET TO THE PROPERTY OF TH
	2 0 ~ 2
	2 X
	3 07
	2 ~ 3
à)	
	3 x
	This process confinus upto n
2	1+2+3+ +n
	" promited by the first to the
	= $n(h+1)$
(«I	2 f (31 - 21) = 2 f (31 - 21) p
	$f(n) = n^2 + 1 - 0(n^2)$
	2
40 5	
0-2	$3n^2+2$ = complexity $O(n^2)$
-1.0	= complexity O(n2)
	Int 6) Audies I the discussion in

10 >2	T[n] = T[n-1]+1 (1 if n)
0.73	T[n] = T[n-1]+1
	TUN
	T (N-1)+1 N>0
	T(n) = T(n-1) + 1
	(·· TU) = T (n-1) +1
	Substitute T(h-1)): +(h-1) = +(h-2)+1
	+[n] = [T(n-2)+1]+1 :. T(n-2) = T(n-3)+1
	T [n] = & T [n-1] + 2
	if Substitute again
	0
	+ [n] = + + (h-3)+1]+2
-	+ [n] = T [n-3] +3
	to the second se
	•
	Continues for K times:
	t(n) = t(n-k)+k (Assume $n-k=0$)
	(10.3)
	· 1000
	· HOOK
	T[n] = T[n-n] + n
	$\mp T(0) + n$
	T(0)+n T(n) = 1+n is the time
	Bince 1+10 selongs to the linear Cleus O(1) that
ē	is why & it is called O (n)
	V.

~	
4	f(n) = 10,000
	complexity oci)
	¥.
	Constant time.
: 8	
(3)	f(n) = n
	n(=) n(n-1) (n-2)
	factorial (int n)
	if (n==0) n==1) \$ => 0(1)
	Sturn 1'
	10 return n * factorial (n-1); } Indivisual et will take 0(1)
	will take ner
	(Not 1414 (CI)
	complexity o(n) as
	S .

final Result Q>2 $P_1 = 3n^3 + 2n^2 + 4n + 1$ 139/4 2016 -> 285 P2 = 2n + 4n2 + 6n3+n4 ->12/2 -> 2/1/ Polynomial Multiplication using linked list Linkedlist Mode Structure 3n7 + 20n6 + 28n5 + 39n4 + 26n3+ 12n2 power pointer to Next Node +2h Ang coff $\boxed{3|3| \rightarrow 2|2|}$ > (4 2) +> Step! PIXP=> (3131)>2121>4111>>101/1)×(211)>414+>631>141/1) [4|3] [>|8|2] > 211/1) + ((13|3) -> 2|2] -> 41] -> 110/1) X [412] -> [613] -> [141])) [6]413/4131] 82] > [21] + [25] + [8] > [6]3] > [42]) + ((313) +) [212] -> [4]] -> [10]] × ([63] -> [14])) ナ 203 ナ 122 → 2111 + (186) サブロリナー244 ナ > 14 4 [6131/1))+(1313 +>[1212]->141]->161/1× (114/1)) > 122 > 21/1 + (37) > 246) [8/6] >> 245] 38/4

Question 3:											
Initial Linked List	3->	19->	10->	1->	12->	20->	15->	9->	11->	18	
									*········		
	3->	19->	10->	1->	12->	20->	15->	9->	11->	18	
Step 1	3->	10->	1->	12->	19->	15->	9->	11->	18->	20	
Step 2	3->	1->	10->	12->	15->	9->	11->	18->	19->	20	
Step 3	1->	3->	10->	12->	9->	11->	15->	18->	19->	20	
Step 4	1->	3->	10->	9->	11->	12->	15->	18->	19->	20	
Step 5	1->	3->	9->	10->	11->	12->	15->	18->	19->	20	
Step 6	1->	3->	9->		11->					20	No swap made
Final Sorted Linked	1->	3->	9->	10->	11->	12->	15->	18->	19->	20	
List											