	HWI = Gulogon		
	HWI	in the second	
	7 / 20		
	× 1		
	a) while took vans de perdurg on de	ammy value I while	ch
	let us say that last value of 1 1	s the input. (11)	9
	K = number of times the while	iteration while loop	
	teep runs for input of n.		2
	n=22 logn=2 log(2) +	2	14
	10g1 = 2" (sq (2) = K (0q (2)	3	16
	log (logn) = K (Olog(log(n))	K	22 = N
	(09(2)	43 41	200
	b) for loop runs in turnes outside,	for loop runs 1	1 Aspole
	worst case = if statement is tr	Je.	
	Furture = 05 0(1) + 0(500(1))=		
	The if will run B(NT) - of	fine cases of n	
	ninput its if statement is to	Ue .	
	1, 1 (i=1) 4 2 (j=2,4)		
	4 2 (122,4)		
	9 (1=3,1=6,7=9)	A 2 2 5 0 2 5	
	nun+1100=0 (n) + 5 (50 (1))=0(n) +	On n = On = O(n 3.	٥
	two rested for loops both runni	ng n times.	
	one fooloop that doubles m.	the if statement could	be always
	runtime= A(\$ (A\$ (A\$ (O(1)))) = A(r	12 * log(n) conta	ant know
	Iterational loop in value > n=	log(m) > inner for	lano
	2	log(m) > inner for runs Olgg	(n)
	2 4	3,)	C. 13
	3 8		
	$n = 2^n = m$		
1			
		2-5	
		Y	

F	
	d) Contains the an times lif statement true worst case.
	12 to 100 that kind in character to
	it true, run size times,
	runtime = (1) + (2) (1) = - size) + (1)
	d) for loop that runs in times if statement true worst case. if true, run size times, runtime = $\Theta(1) + \Theta(\Sigma(0(\frac{3}{3} \cdot \text{size})) + \Theta(1))$ ipopans it value = $\Theta(1) + \Theta(\Sigma(0(\frac{3}{3} \cdot \text{size})) + \Theta(1))$ ipopans it value = $\Theta(1) + \Theta(\Sigma(0(\frac{3}{3} \cdot \text{size})) + \Theta(1))$ ipopans it value = $\Theta(1) + \Theta(\Sigma(0(\frac{3}{3} \cdot \text{size})) + \Theta(1))$ ipopans it value
	110(3)
	j + 3 m
	10, 12 m.3
	1001 = 11012
	N= 109 x 0/ 00 12 7 191
	1003 = n1003 = 100
The strength of the strength o	