a) Mathematical oquations. - Definition of variables and parameters. > NE = Population of bacteria at time t	
- Definition of variables and parameters.	
>NE = Population of bacteria at time t	
> Y = intringing agorath rects.	
→ K = (arrying capacity of environment (population)	
>t=tmo	
> No = initial population size.	
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
- Mathematical equations	
The logistic growth equation models population gr	owth
with a limiting factor $dN = rN(1-N)$ dt	
the Text of the Te	
- Derivation from first principles.	
At at from idea that hattack insulation chance	2
Is accompliance to another population	
is proportional to ending population	
start from idea that batterial population changes is proportional to existing population dN = YN dt	
Exponential growth model. To account for limited	in eithe margin
resources, introduce a growth limiting factor base	pd
on current population.	
Net growth rate = vil 1-N	
The great are in ()	
Thus I was a series of the ser	
$dh = \lambda h(1-h)$	
dt (K)	
αυ ()-/	
- Assymptions made.	
> Homogenous population that is, no age or size str	ycture
> Constant environmental conditions	,
> Growth rate v and carrying rapacity K are consta	ints: