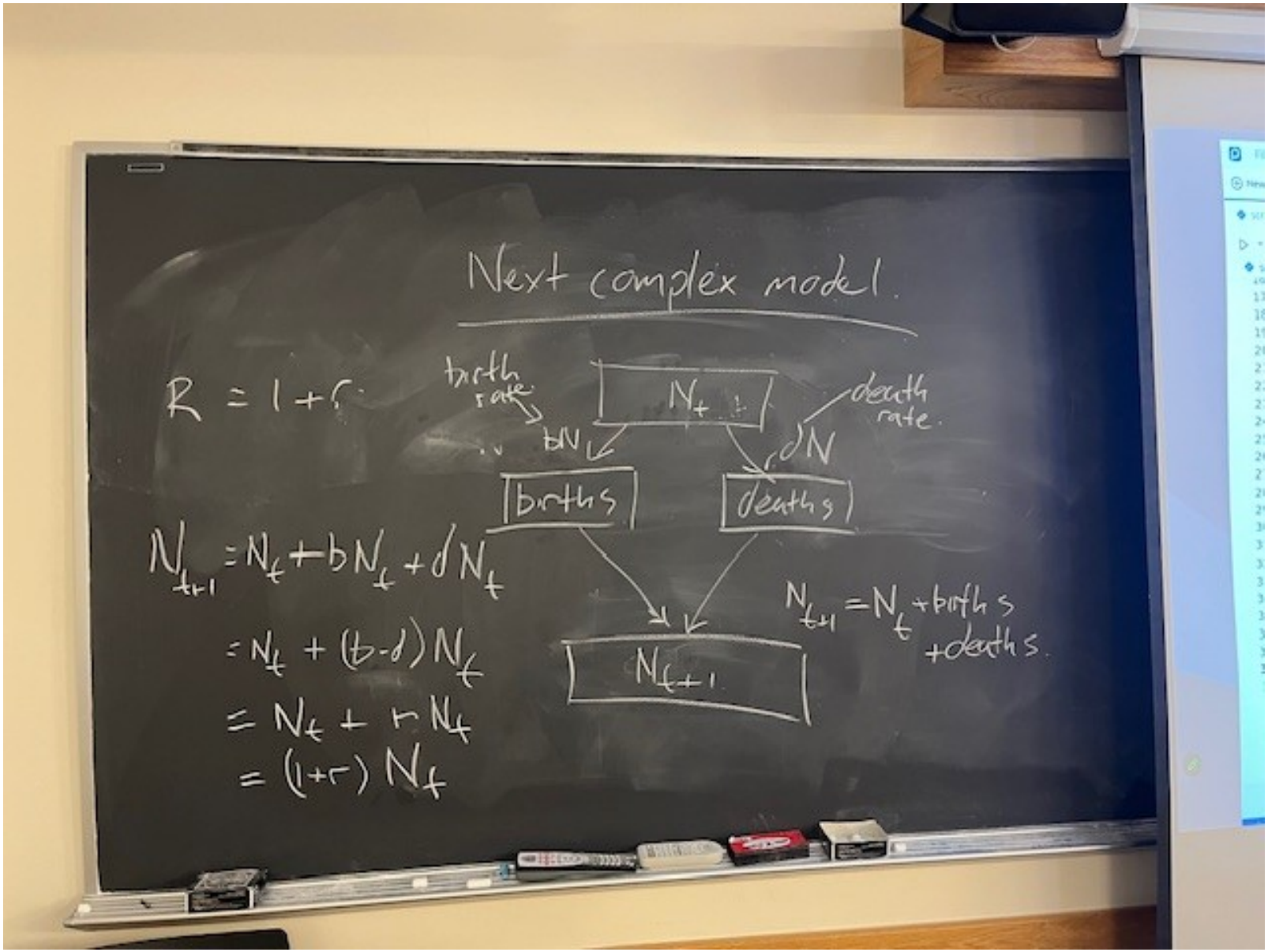
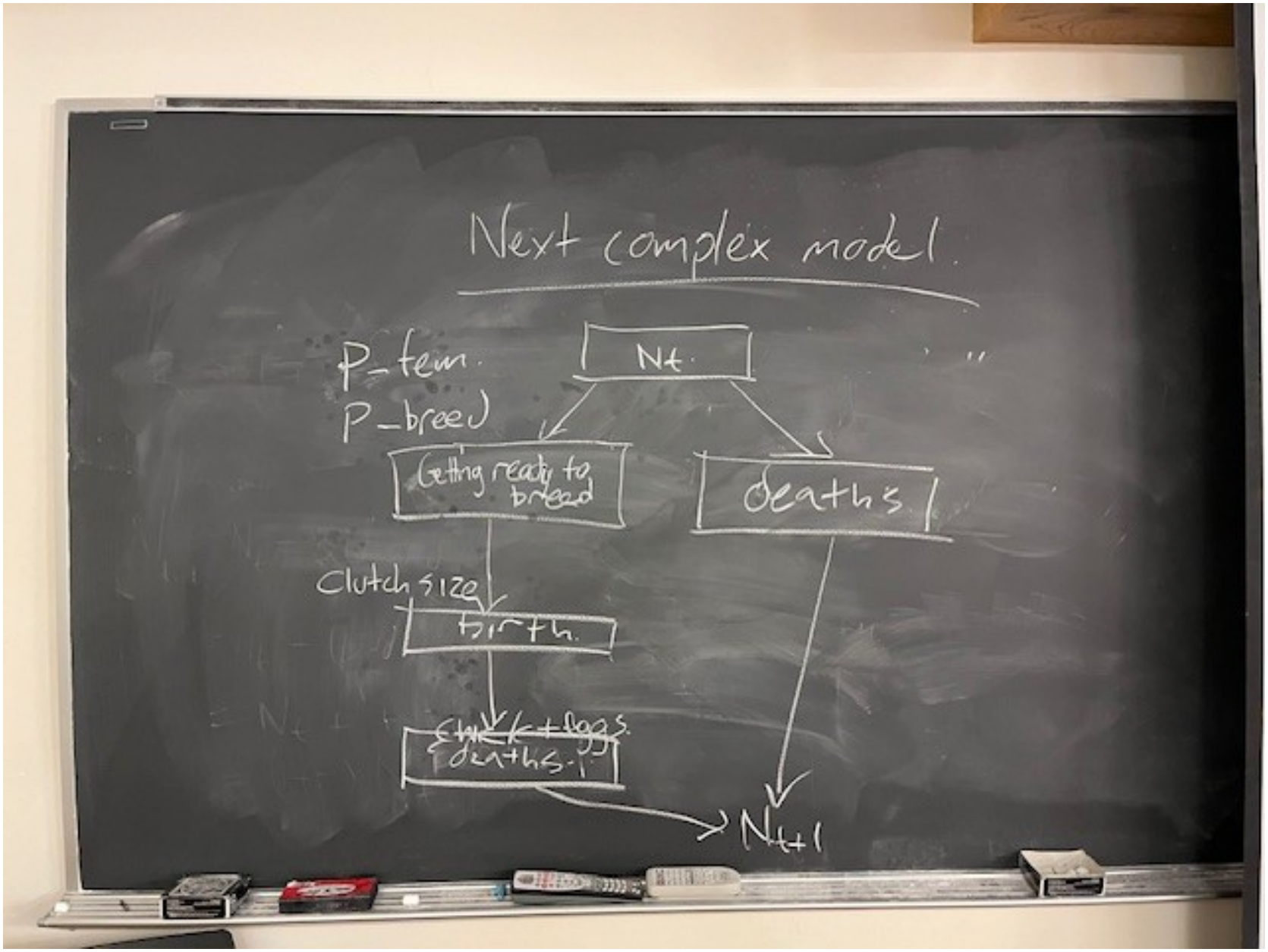
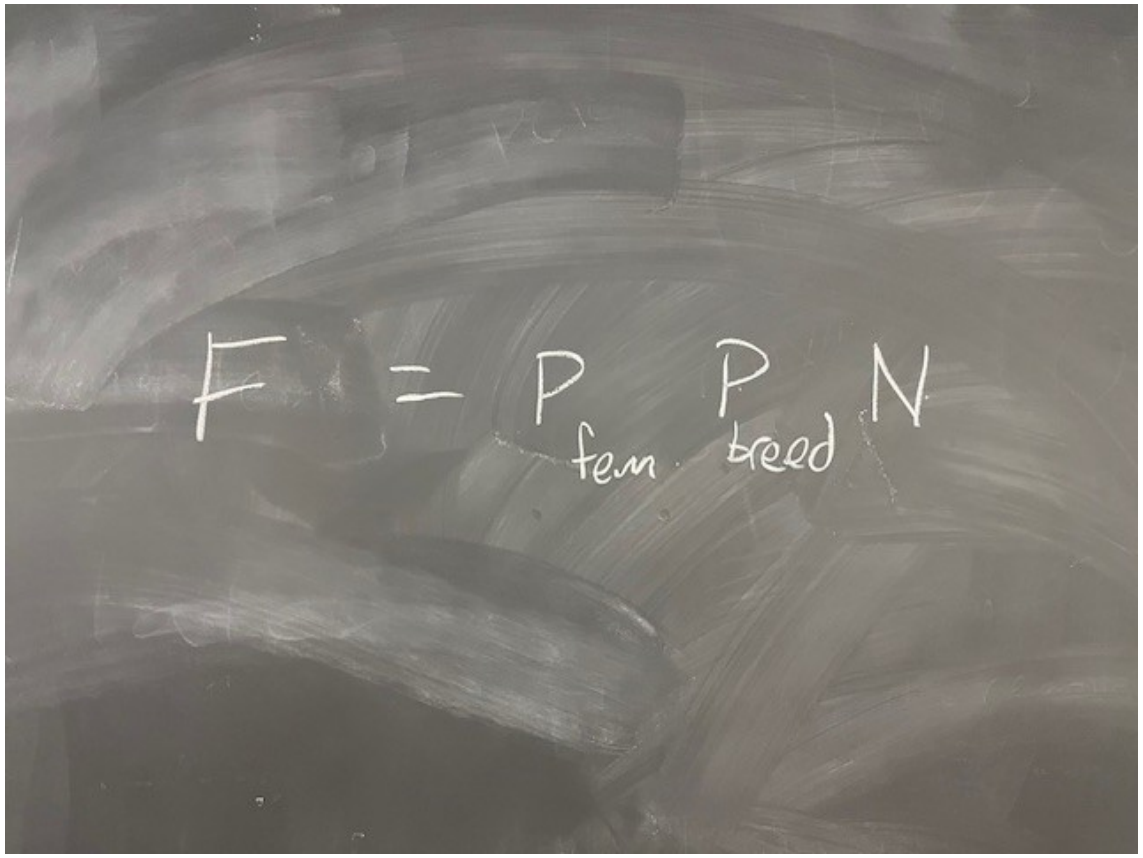
Simplest

$\Delta t = 1 \quad N_{t+1} = R N_t$


Next complex model.
$R = 1 + r$
birth rate
N_t
death rate.
bN
dN
births
deaths
$N_{t+1} = N_t + bN_t + dN_t$
$= N_t + (b-d)N_t$
$= N_t + rN_t$
$= (1+r)N_t$
N_{t+1}
$N_{t+1} = N_t + \text{births} + \text{deaths}$


Next complex model
P_fem
P_breed
Nt
Getting ready to breed
deaths
Clutch size
birth
deaths-1
Nt+1


F = P P N
fem breed