Spreading a flu

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1 Model

- S(t) - number of individuals that are potentially infected in time T

- I(t) - number of infected individuals in time T

- R(t) - number of individuals that were infected and the assumption is that they are immune to the flu

- Δt -small time interval

- $t_n = n\Delta$t

- β - the factor that denotes how easy people get infected in a time interval Δt

- γ - the factor that denotes the probability of recovering in a time interval Δt

1.1 Equations

- $S^{n+1} - S^n = -\beta S(t_n)I(t_n)\Delta t$

- $R^{n+1} - R^n = \gamma I(t_n)\Delta t$

- $I^{n+1} - I^n = -\beta S(t_n)I(t_n)\Delta t + \gamma I(t_n)\Delta t$