

$$\begin{aligned}\frac{dS}{dt} &= -\beta \cdot S \cdot I \\ \frac{dI}{dt} &= \beta \cdot S \cdot I - \gamma I \\ \frac{dR}{dt} &= -\gamma \cdot I\end{aligned}$$

$$S_{n+1} = S_n + (-\beta \cdot S_n \cdot I_n) \cdot \Delta t$$

$$I_{n+1} = I_n + (\beta \cdot S_n \cdot I_n - \gamma \cdot I_n) \cdot \Delta t$$

$$R_{n+1} = R_n + (\gamma \cdot I_n) \cdot \Delta t$$

$$t_n = n \cdot \Delta t$$

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$$y_0 = 100$$

$$S_{n+1} = S_n + (-\beta \cdot S_n \cdot I_n) \cdot \Delta t$$

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$$\begin{aligned}y_0 &= 100 \\ t_0 &= 0 \cdot 0.5 = 0\end{aligned}$$

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$$y_0 = 100$$

$$t_0 = 0 \cdot 0.5 = 0$$

$$y_1 = 100 + 100 \cdot 0.5 = 150$$

$$\begin{aligned}\frac{dS}{dt} &= -\beta \cdot S \cdot I \\ \frac{dI}{dt} &= \beta \cdot S \cdot I - \gamma I \\ \frac{dR}{dt} &= -\gamma \cdot I\end{aligned}$$

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$$y_0 = 100$$

$$t_0 = 0 \cdot 0.5 = 0$$

$$y_1 = 100 + 100 \cdot 0.5 = 150$$

$$t_1 = 1 \cdot 0.5 = 0.5$$

$$\begin{aligned}\frac{dS}{dt} &= -\beta \cdot S \cdot I \\ \frac{dI}{dt} &= \beta \cdot S \cdot I - \gamma I \\ \frac{dR}{dt} &= -\gamma \cdot I\end{aligned}$$

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$$\begin{aligned}y_0 &= 100 \\ t_0 &= 0 \cdot 0.5 = 0 \\ y_1 &= 100 + 100 \cdot 0.5 = 150 \\ t_1 &= 1 \cdot 0.5 = 0.5\end{aligned}$$

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$$\begin{aligned}y_0 &= 100 \\ t_0 &= 0 \cdot 0.5 = 0 \\ y_1 &= 100 + 100 \cdot 0.5 = 150 \\ t_1 &= 1 \cdot 0.5 = 0.5 \\ y_2 &= 150 + 150 \cdot 0.5 = 225\end{aligned}$$

$$\begin{aligned}\frac{dS}{dt} &= -\beta \cdot S \cdot I \\ \frac{dI}{dt} &= \beta \cdot S \cdot I - \gamma I \\ \frac{dR}{dt} &= -\gamma \cdot I\end{aligned}$$

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$$\begin{aligned}y_0 &= 100 \\ t_0 &= 0 \cdot 0.5 = 0 \\ y_1 &= 100 + 100 \cdot 0.5 = 150 \\ t_1 &= 1 \cdot 0.5 = 0.5 \\ y_2 &= 150 + 150 \cdot 0.5 = 225 \\ t_2 &= 2 \cdot 0.5 = 1\end{aligned}$$

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$$R_{n+1} = R_n + (\gamma \cdot I_n) \cdot \Delta t$$

$$t_n = n \cdot \Delta t$$

$$y_0 = 100$$

$$t_0 = 0 \cdot 0.5 = 0$$

$$y_1 = 100 + 100 \cdot 0.5 = 150$$

$$t_1 = 1 \cdot 0.5 = 0.5$$

$$y_2 = 150 + 150 \cdot 0.5 = 225$$

$$t_2 = 2 \cdot 0.5 = 1$$

$$y_3 = 225 + 225 \cdot 0.5 = 337.5$$

$$\begin{aligned}\frac{dS}{dt} &= -\beta \cdot S \cdot I \\ \frac{dI}{dt} &= \beta \cdot S \cdot I - \gamma I \\ \frac{dR}{dt} &= -\gamma \cdot I\end{aligned}$$

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$$R_{n+1} = R_n + (\gamma \cdot I_n) \cdot \Delta t$$

$$t_n = n \cdot \Delta t$$

$$y_0 = 100$$

$$t_0 = 0 \cdot 0.5 = 0$$

$$y_1 = 100 + 100 \cdot 0.5 = 150$$

$$t_1 = 1 \cdot 0.5 = 0.5$$

$$y_2 = 150 + 150 \cdot 0.5 = 225$$

$$t_2 = 2 \cdot 0.5 = 1$$

$$y_3 = 225 + 225 \cdot 0.5 = 337.5$$

$$t_3 = 3 \cdot 0.5 = 1.5$$

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$$R_{n+1} = R_n + (\gamma \cdot I_n) \cdot \Delta t$$

$$t_n = n \cdot \Delta t$$

$$y_0 = 100$$

$$t_0 = 0 \cdot 0.5 = 0$$

$$y_1 = 100 + 100 \cdot 0.5 = 150$$

$$t_1 = 1 \cdot 0.5 = 0.5$$

$$y_2 = 150 + 150 \cdot 0.5 = 225$$

$$t_2 = 2 \cdot 0.5 = 1$$

$$y_3 = 225 + 225 \cdot 0.5 = 337.5$$

$$t_3 = 3 \cdot 0.5 = 1.5$$

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$$R_{n+1} = R_n + (\gamma \cdot I_n) \cdot \Delta t$$

$$t_n = n \cdot \Delta t$$

$$y_0 = 100$$

$$t_0 = 0 \cdot 0.5 = 0$$

$$y_1 = 100 + 100 \cdot 0.5 = 150$$

$$t_1 = 1 \cdot 0.5 = 0.5$$

$$y_2 = 150 + 150 \cdot 0.5 = 225$$

$$t_2 = 2 \cdot 0.5 = 1$$

$$y_3 = 225 + 225 \cdot 0.5 = 337.5$$

$$t_3 = 3 \cdot 0.5 = 1.5$$

$$y_4 = 337.5 + 337.5 \cdot 0.5 = 506.25$$

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$$R_{n+1} = R_n + (\gamma \cdot I_n) \cdot \Delta t$$

$$t_n = n \cdot \Delta t$$

$$y_0 = 100$$

$$t_0 = 0 \cdot 0.5 = 0$$

$$y_1 = 100 + 100 \cdot 0.5 = 150$$

$$t_1 = 1 \cdot 0.5 = 0.5$$

$$y_2 = 150 + 150 \cdot 0.5 = 225$$

$$t_2 = 2 \cdot 0.5 = 1$$

$$y_3 = 225 + 225 \cdot 0.5 = 337.5$$

$$t_3 = 3 \cdot 0.5 = 1.5$$

$$y_4 = 337.5 + 337.5 \cdot 0.5 = 506.25$$

$$t_4 = 4 \cdot 0.5 = 2$$