

Educazione civica

# LA MATEMATICA DELLE EPIDEMIE

quarta parte

Gennaio 2021

***L*(0)**

***β***

$$I(0) = 2$$

$$\beta = 4$$



$$I(0) * \beta$$

8

**Totale**

**10**



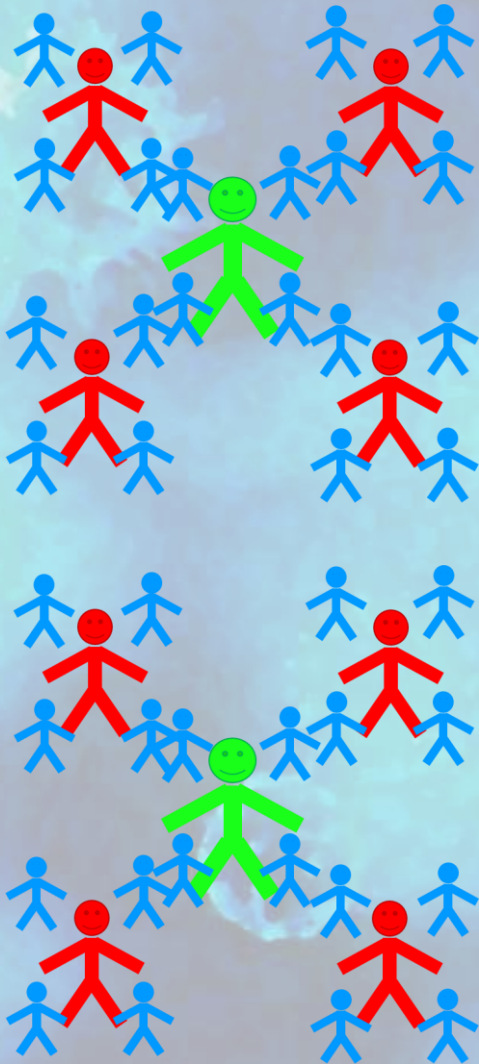
$$I(0) = 2$$

$$\beta = 4$$

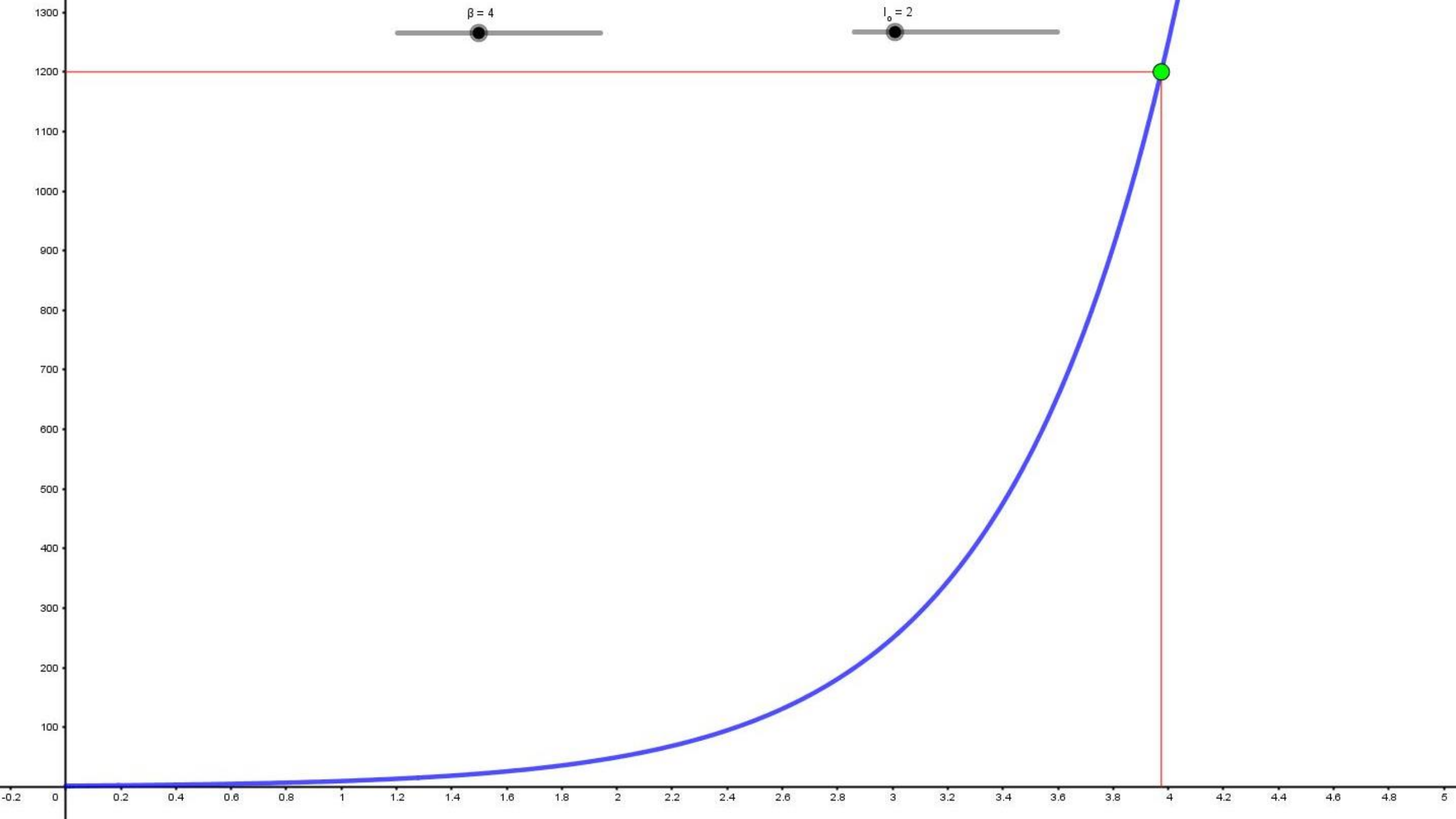


$$I(0) = 2$$

$$\beta = 4$$



		$I(0) * \beta$	<b>Totale</b>
$I(0) =$	2	8	<b>10</b>
$I(1) =$	10	40	<b>50</b>
$I(2) =$	50	200	<b>250</b>
$I(3) =$	250	1000	<b>1250</b>
$I(4) =$	1250	5000	<b>6250</b>
$I(5) =$	6250	25000	<b>31250</b>
$I(6) =$	31250	125000	<b>156250</b>
$I(7) =$	156250	625000	<b>781250</b>
$I(8) =$	781250	3125000	<b>3906250</b>







AN

ESSAY

ON THE

*PRINCIPLE OF POPULATION,*

AS IT AFFECTS

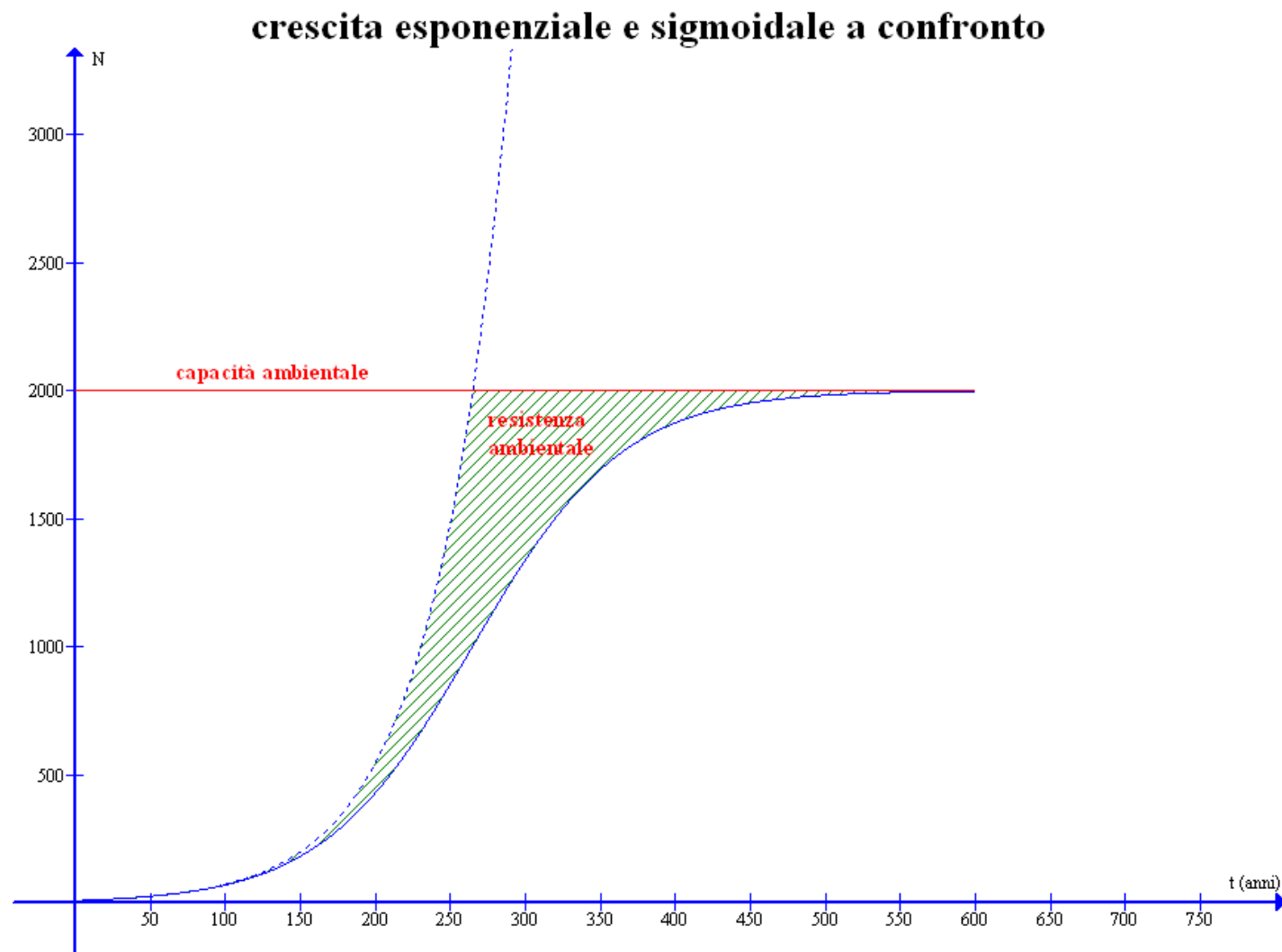
THE FUTURE IMPROVEMENT OF SOCIETY.

WITH REMARKS

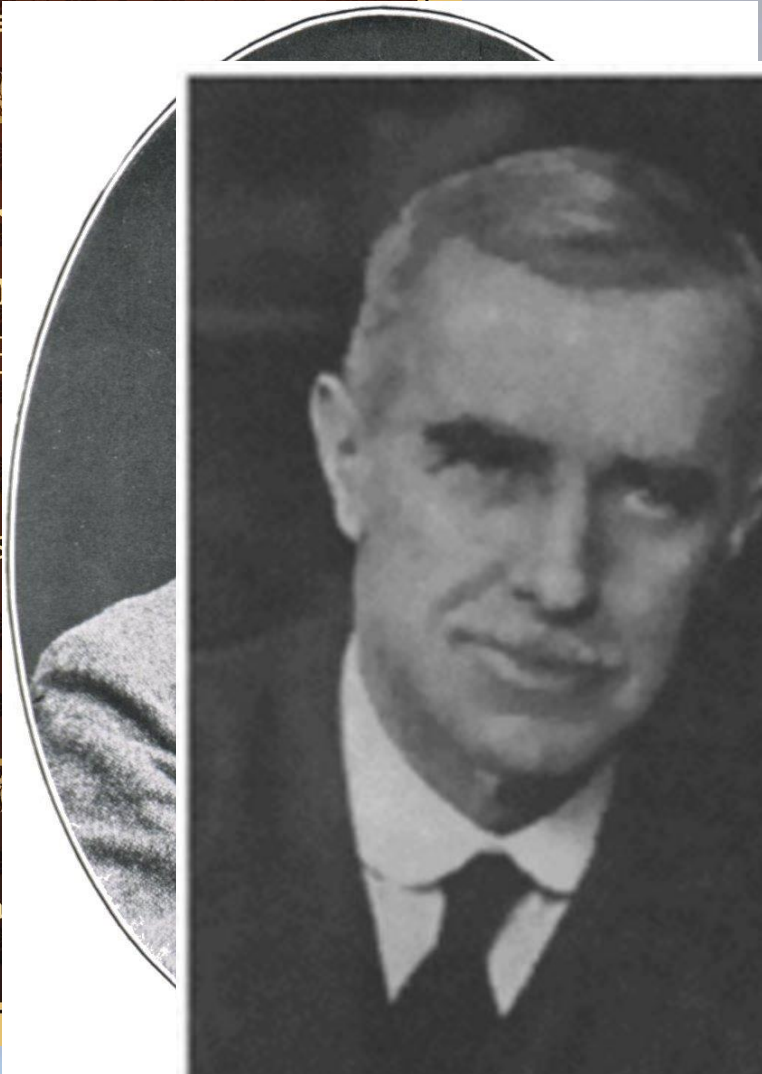
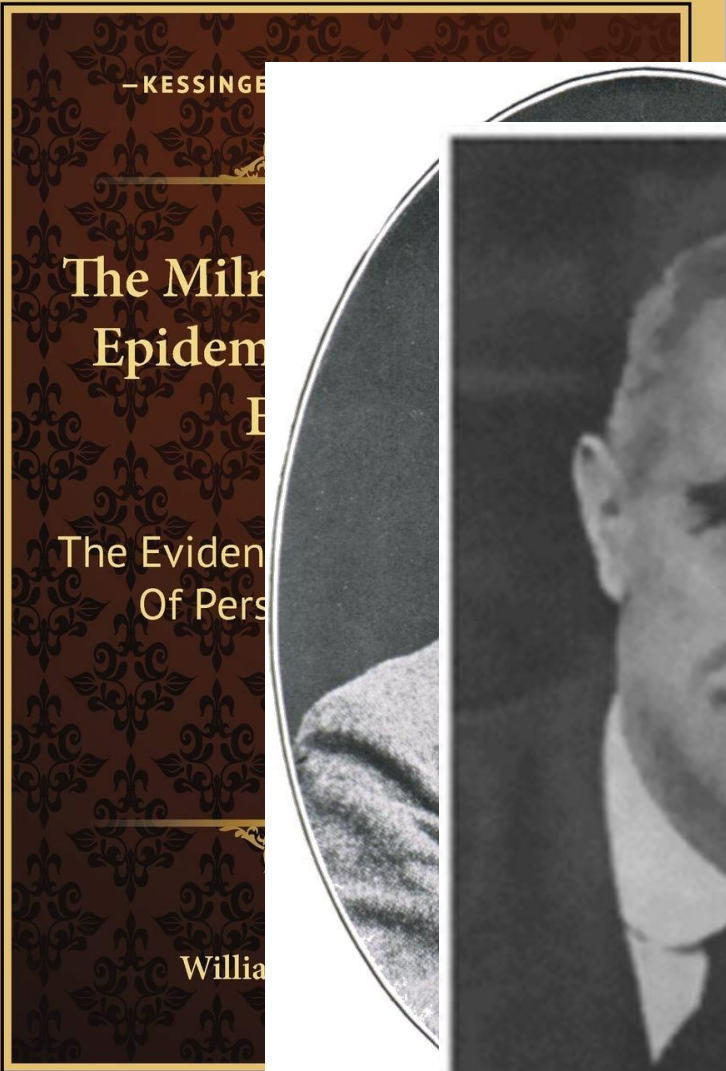
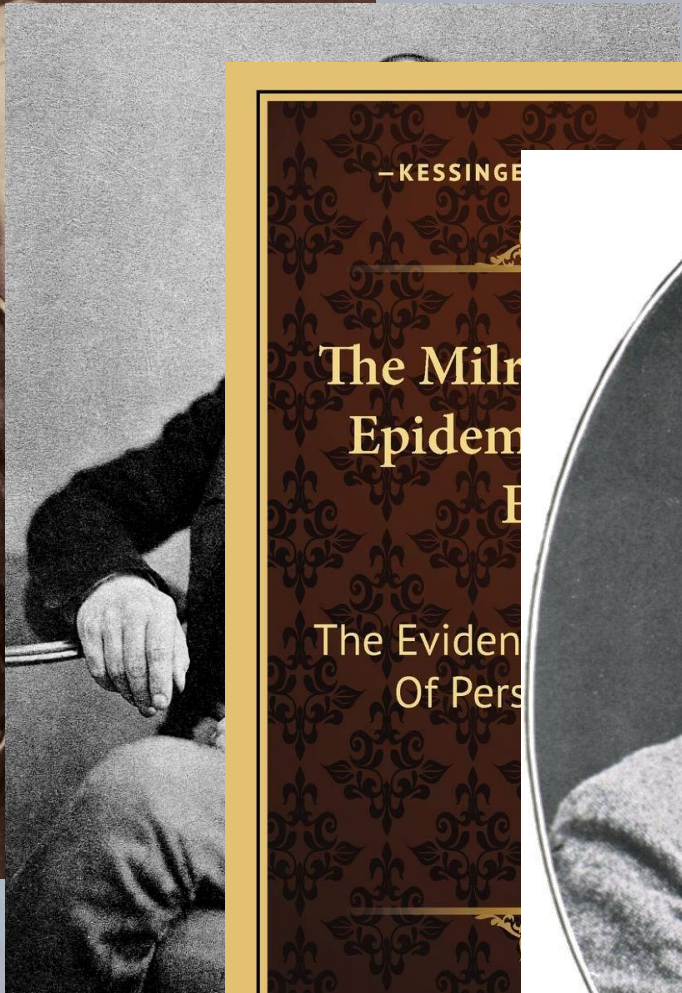
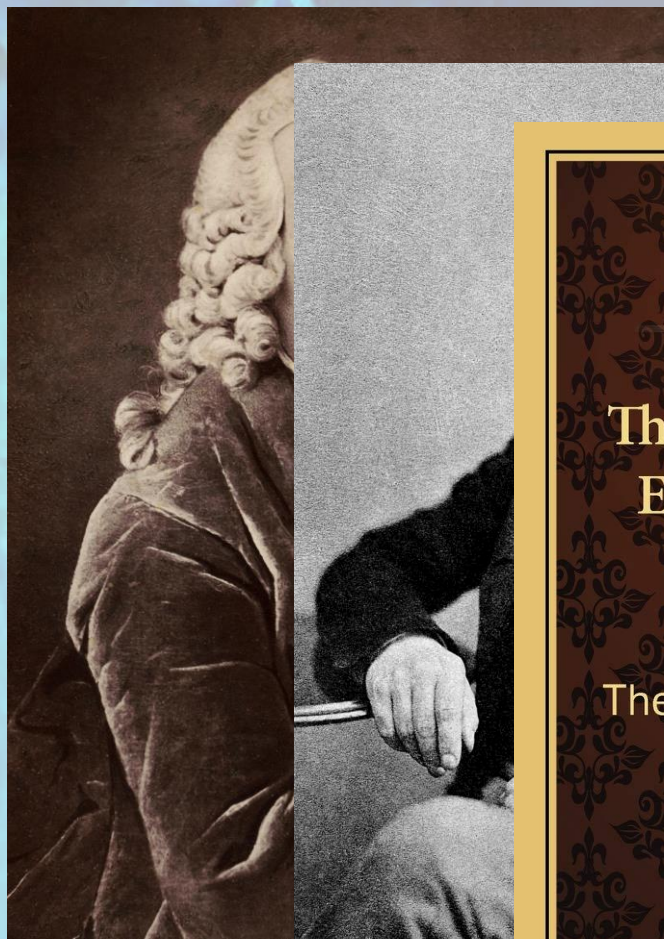
ON THE SPECULATIONS OF MR. GODWIN,

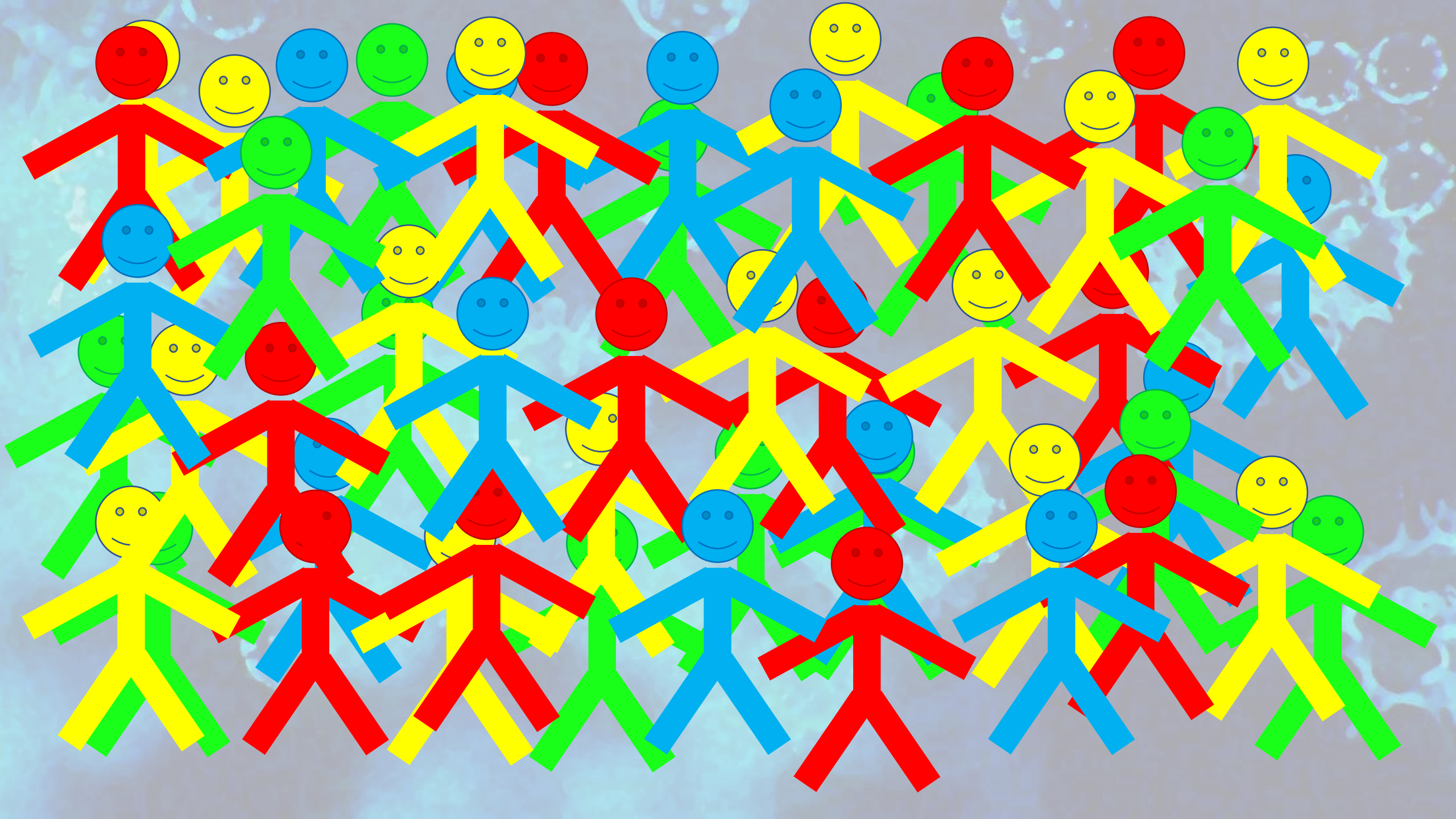
M. CONDORCET,







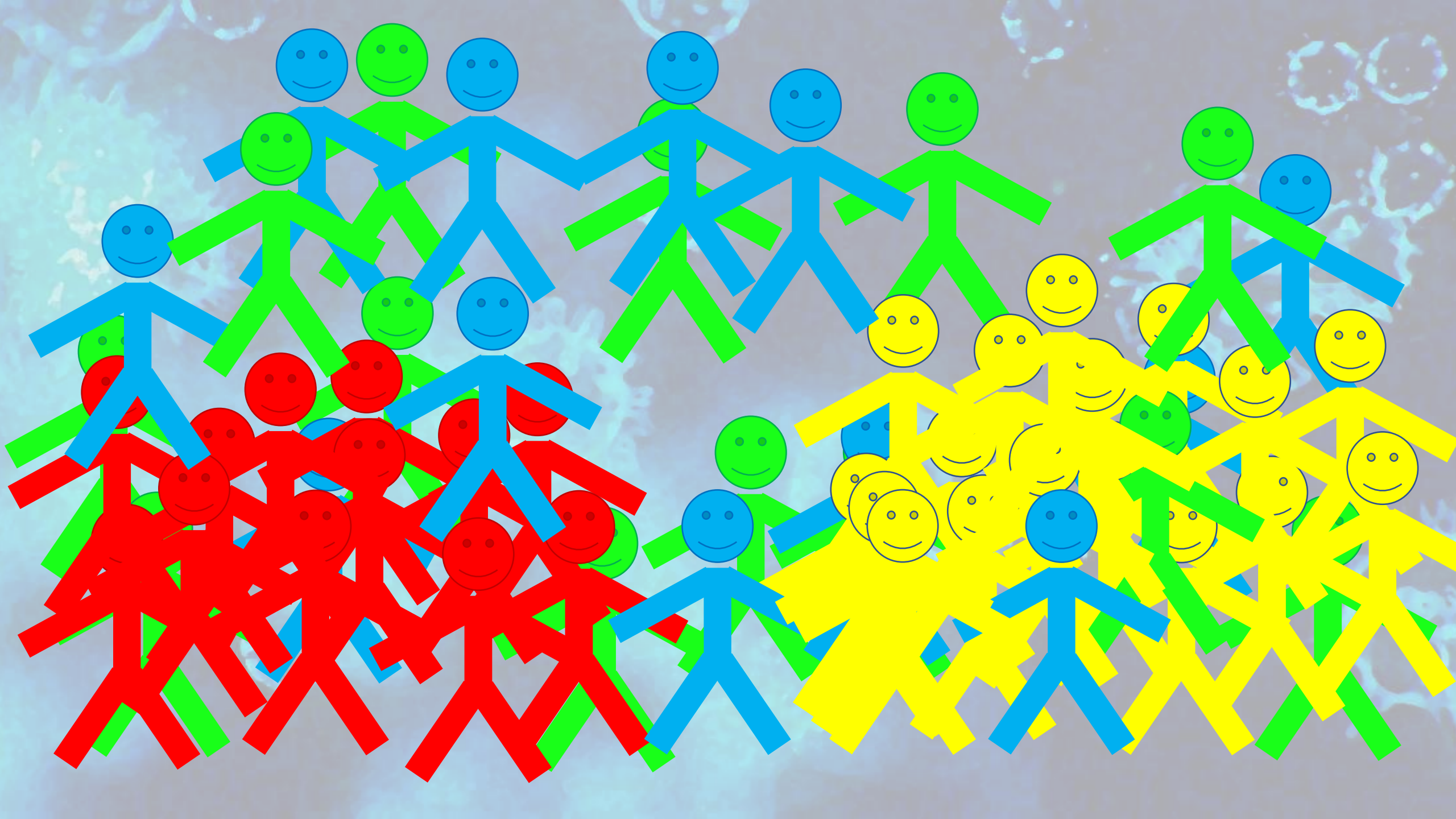


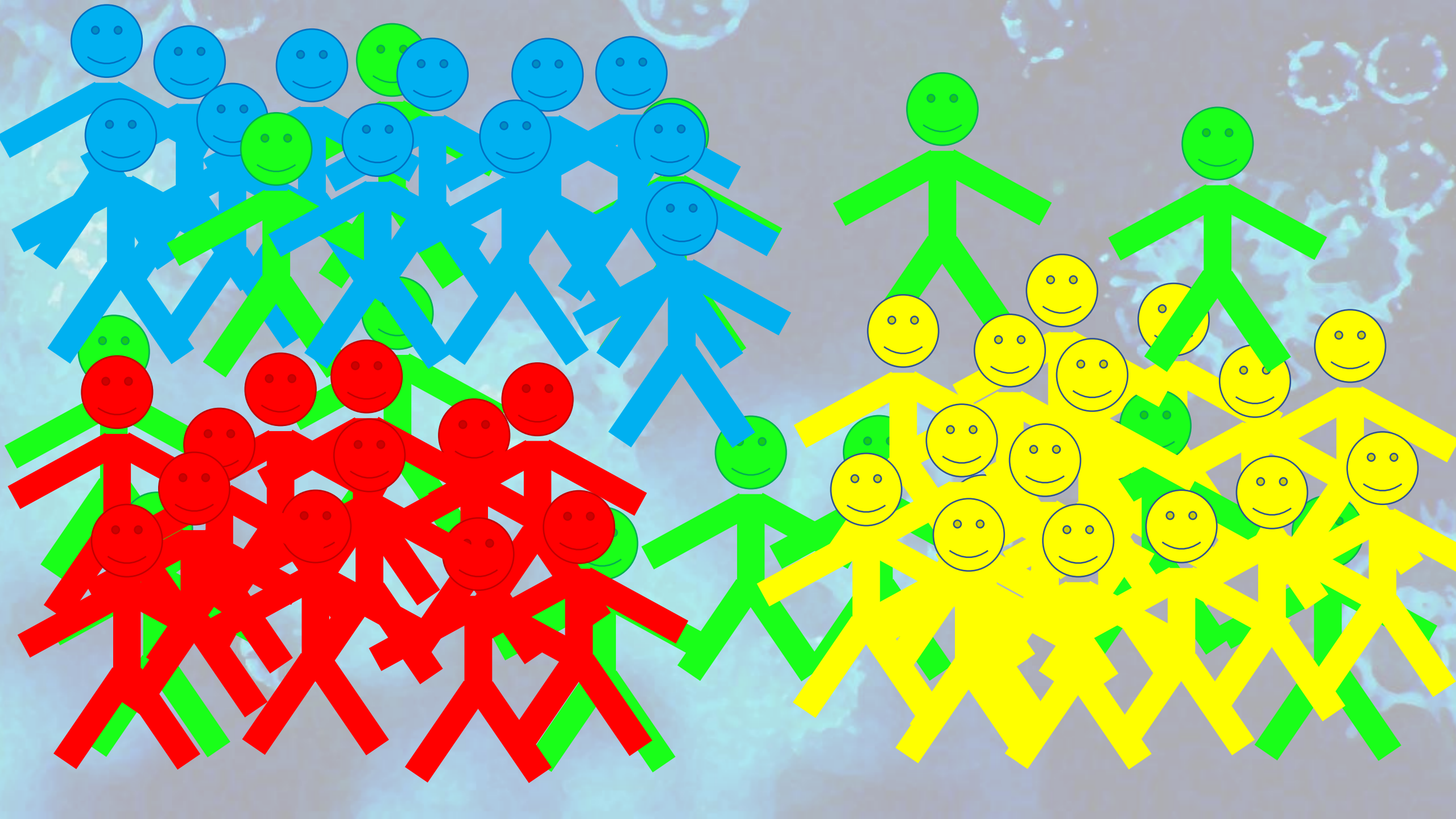


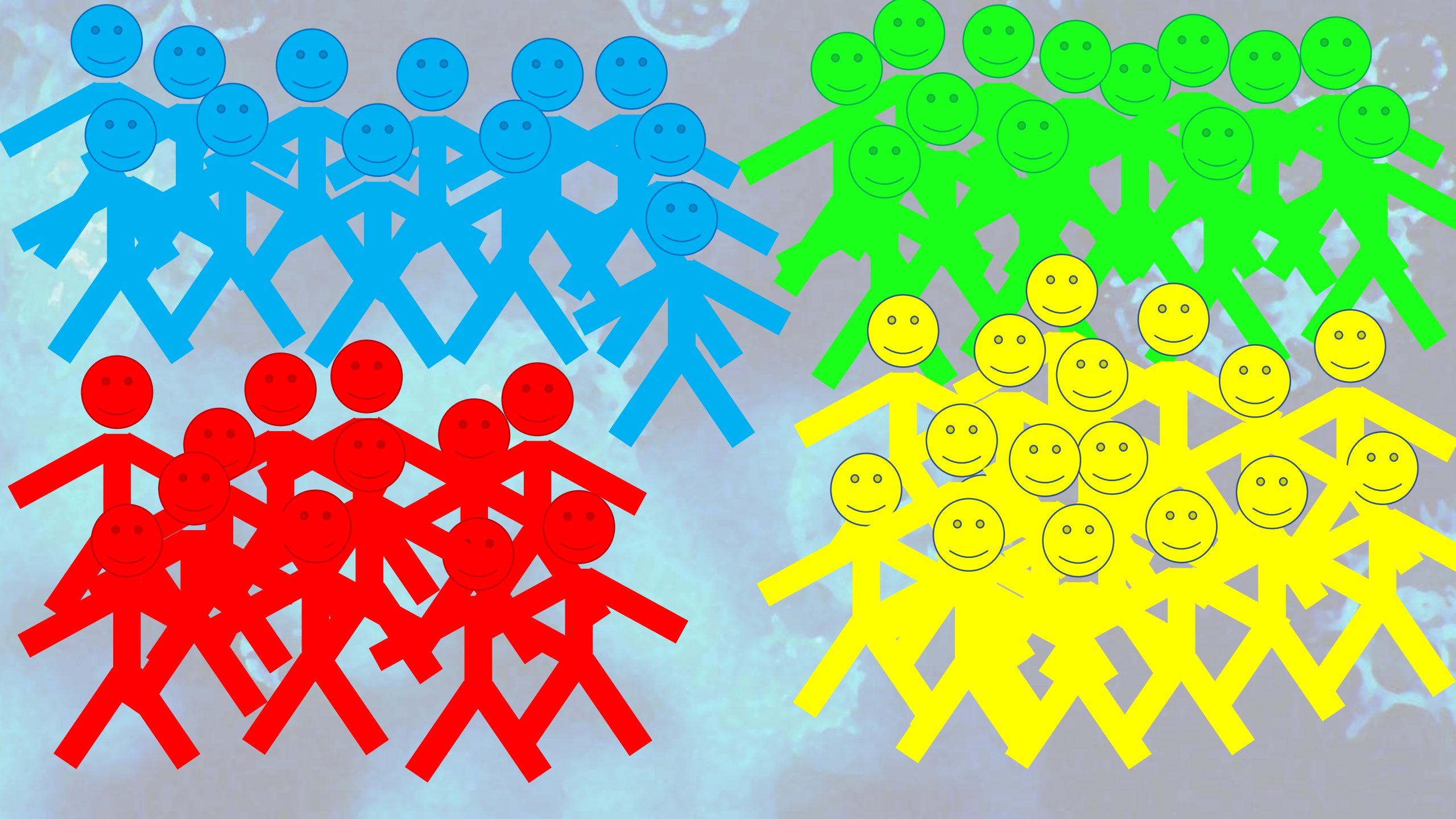














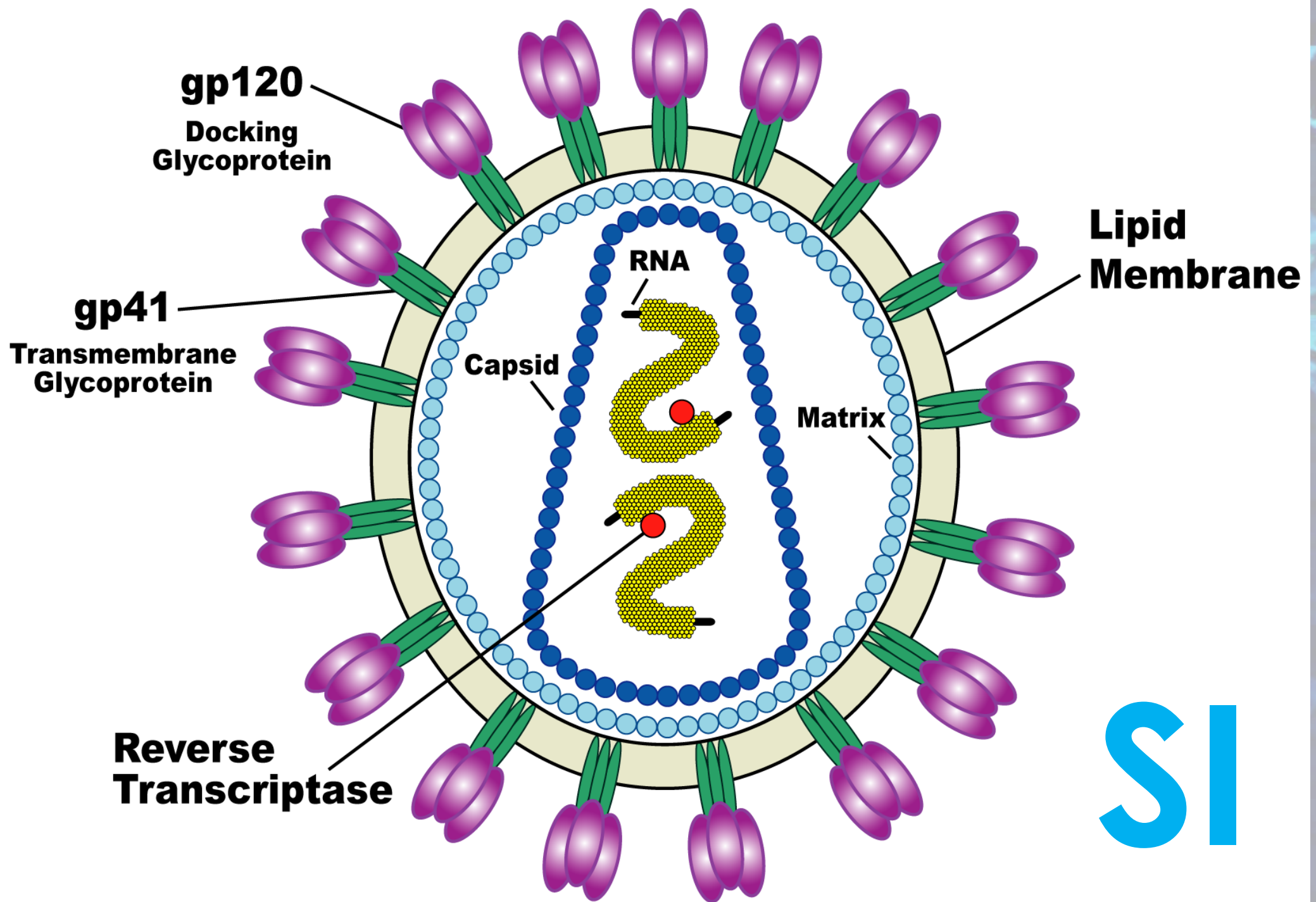


**S**

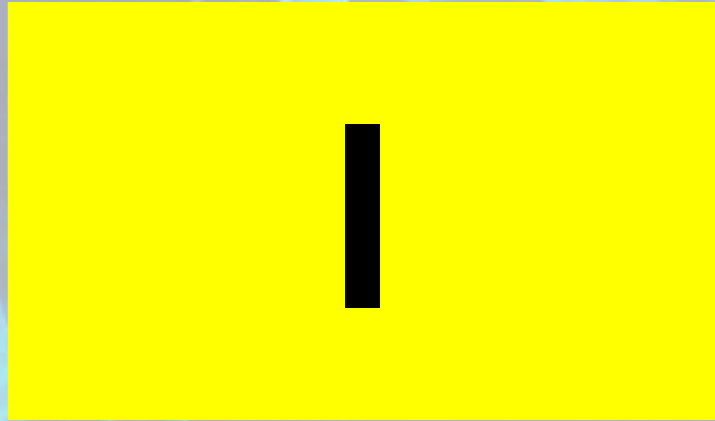
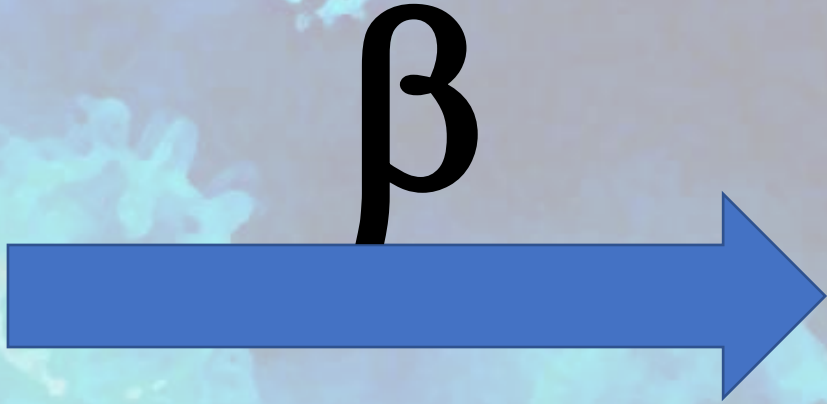
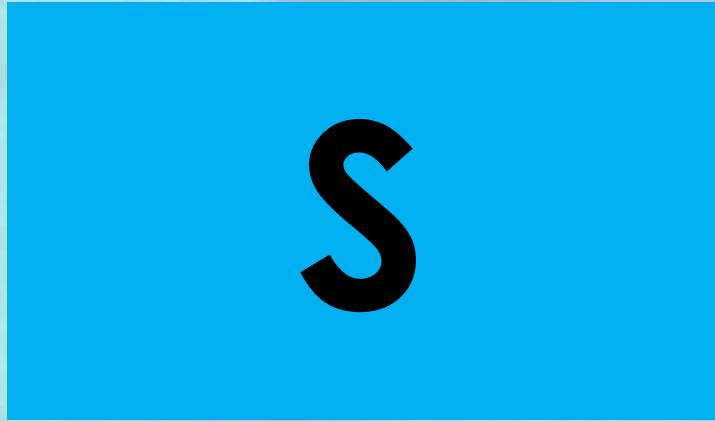


**I**

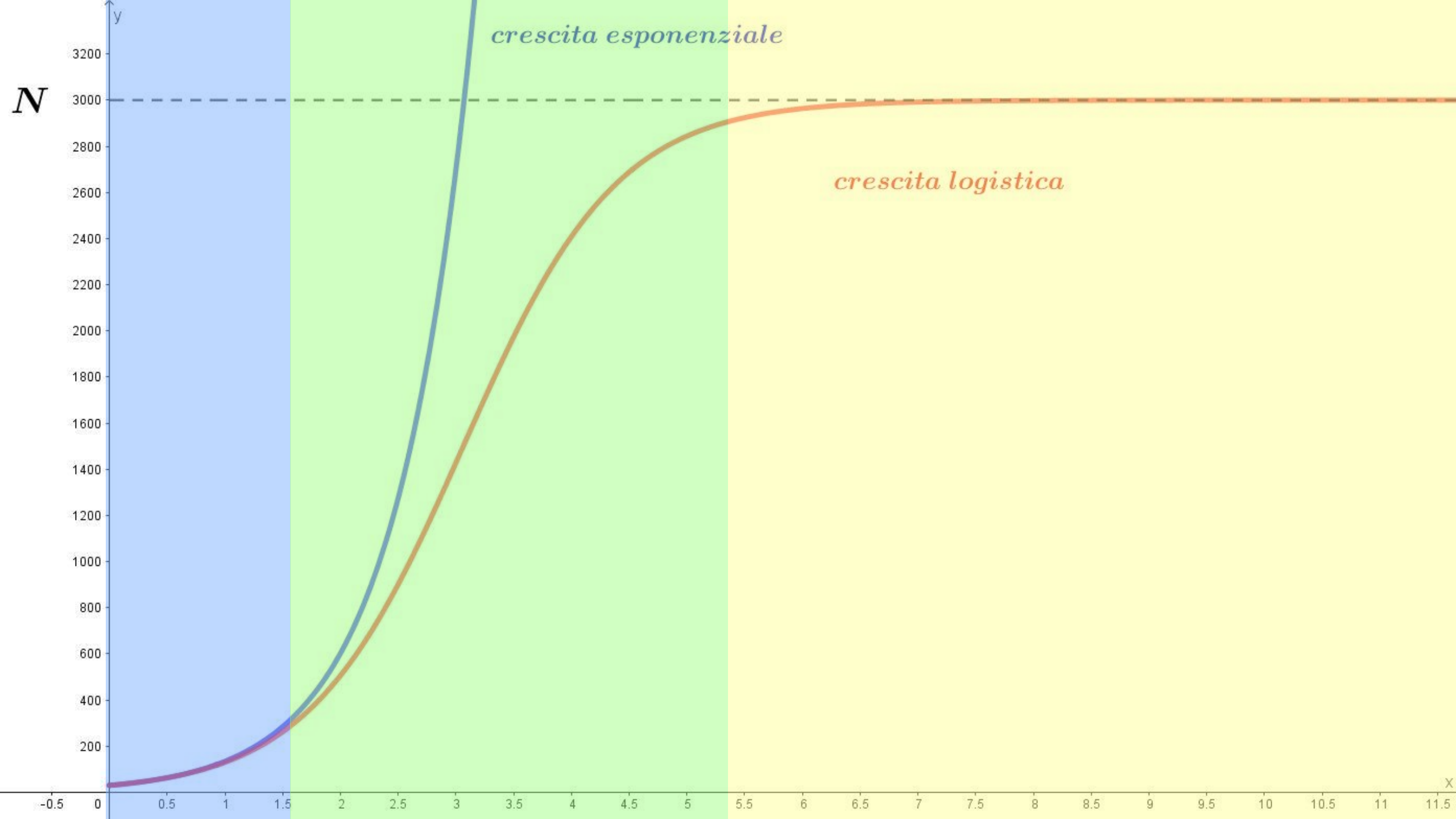
$$N = S + I$$

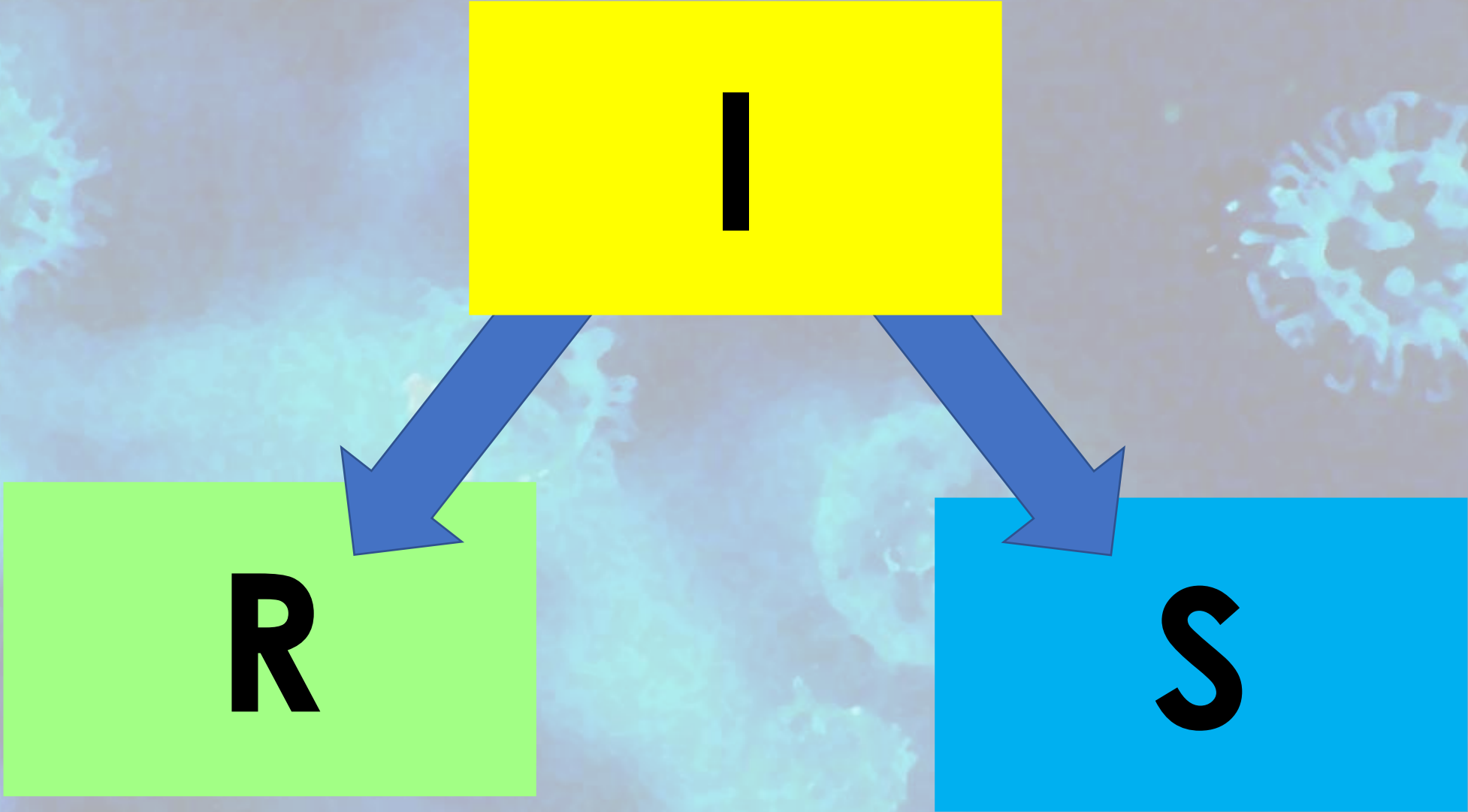


SI







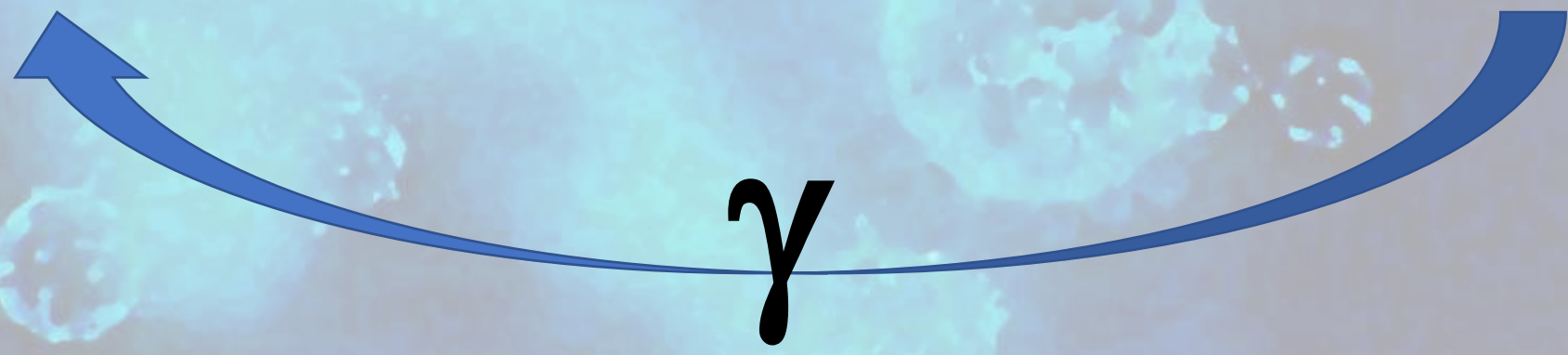
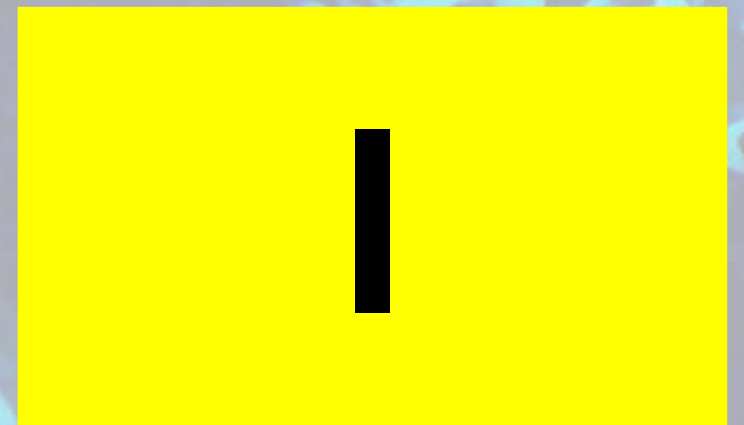
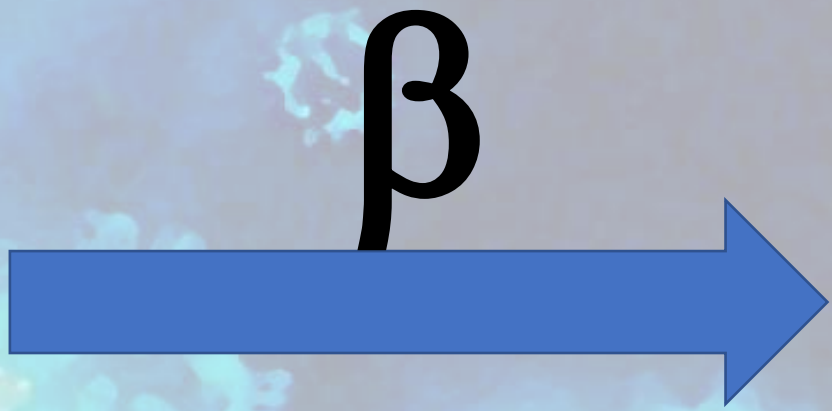


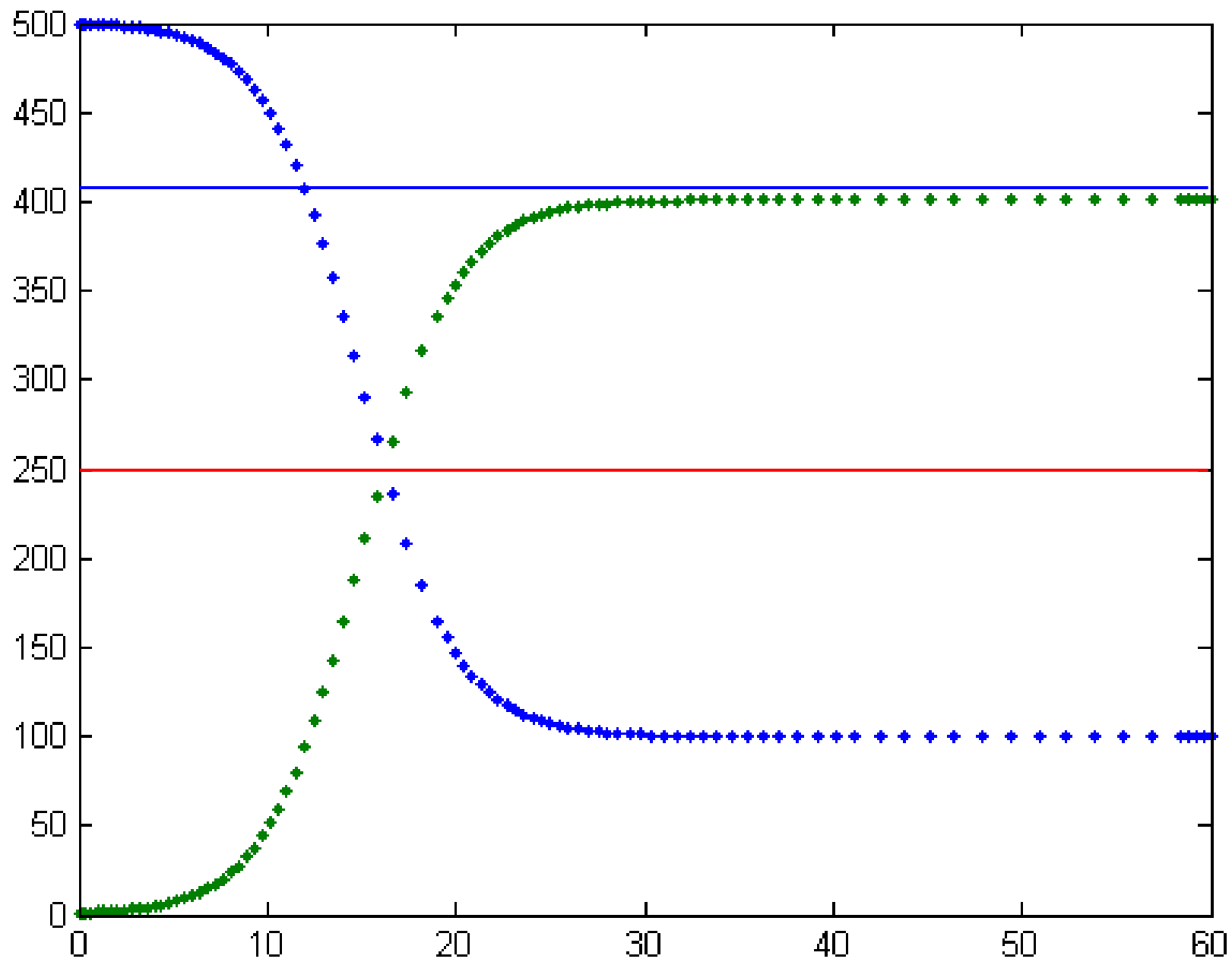
**Non c'è incubazione**

**$\beta$  e  $\gamma$  costanti**

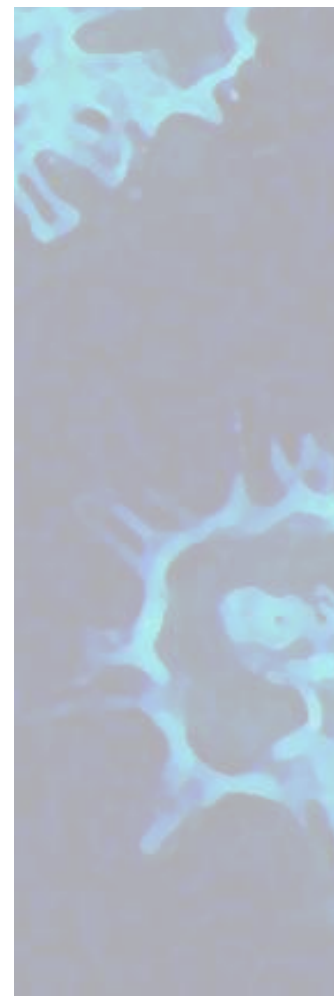
**Probabilità di infezione  
uguale per tutti**







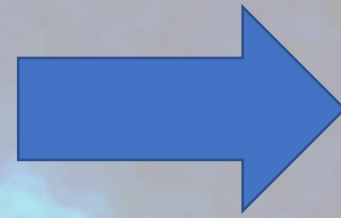
$$N \left( 1 - \frac{\gamma}{\beta} \right)$$



**S**



**I**

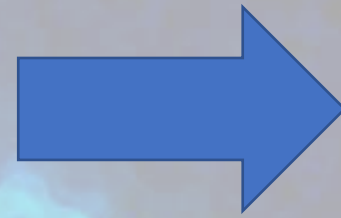
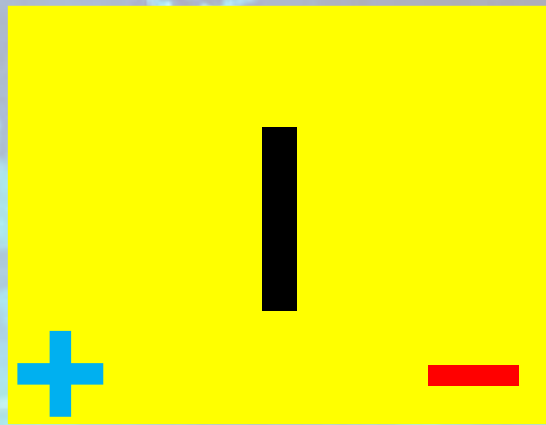


**R**

**Acquisizione di immunità**

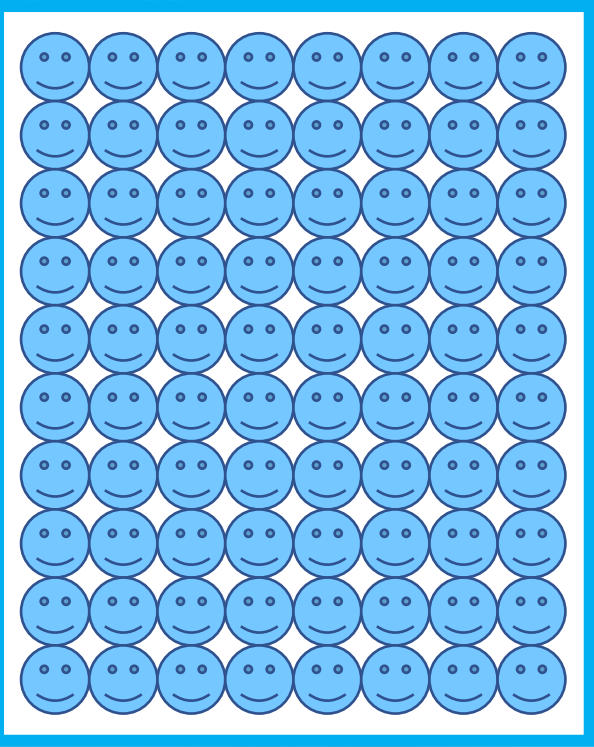




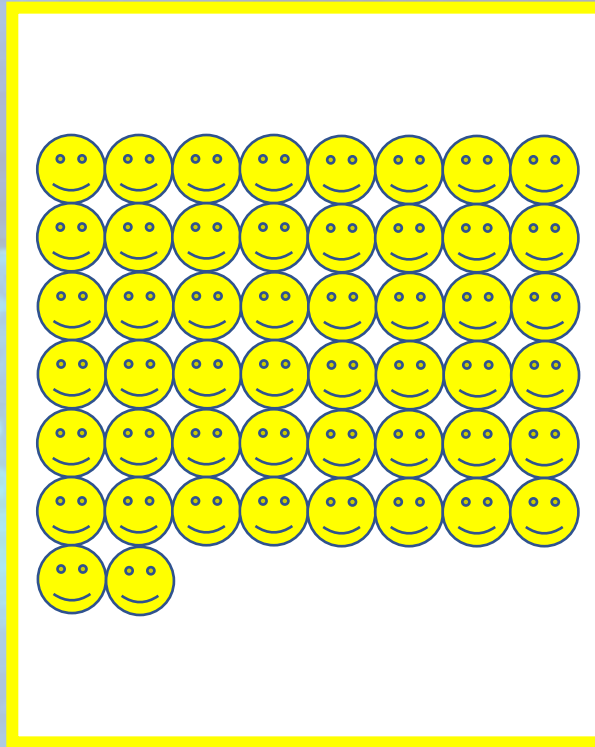


$$\beta S(t) I(t)$$

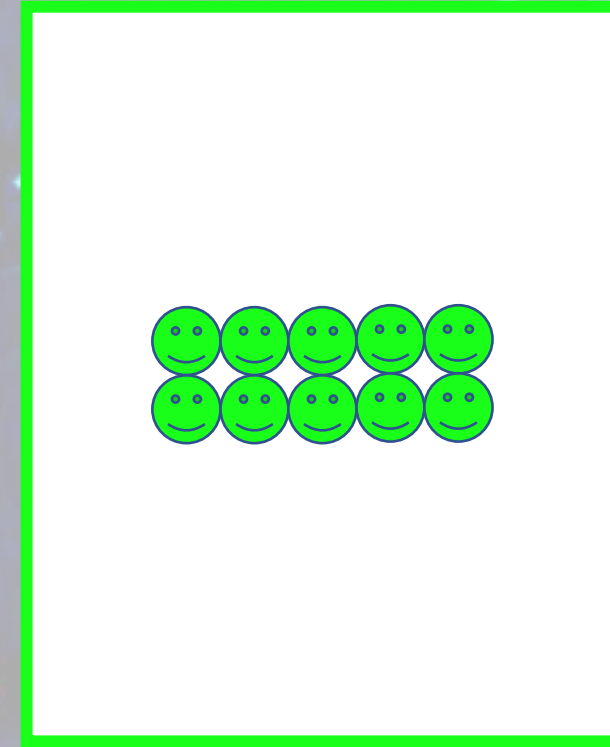
$$\gamma I(t)$$



**80**

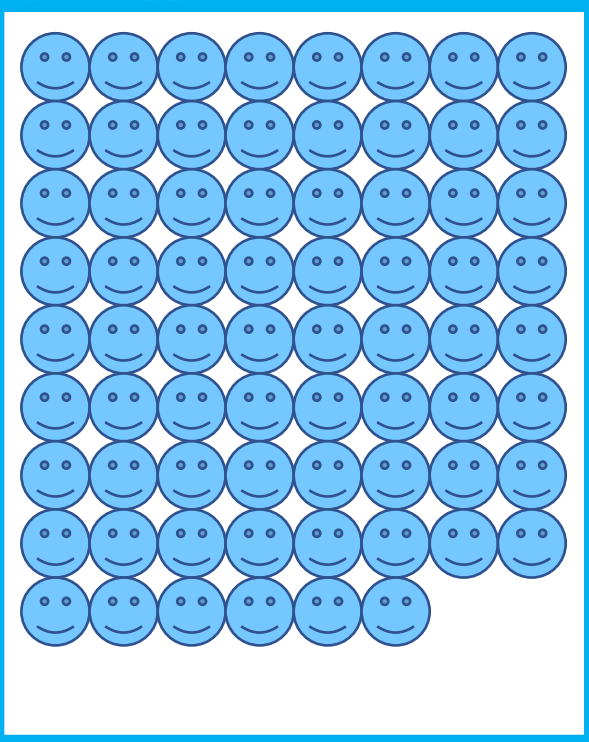


**50**

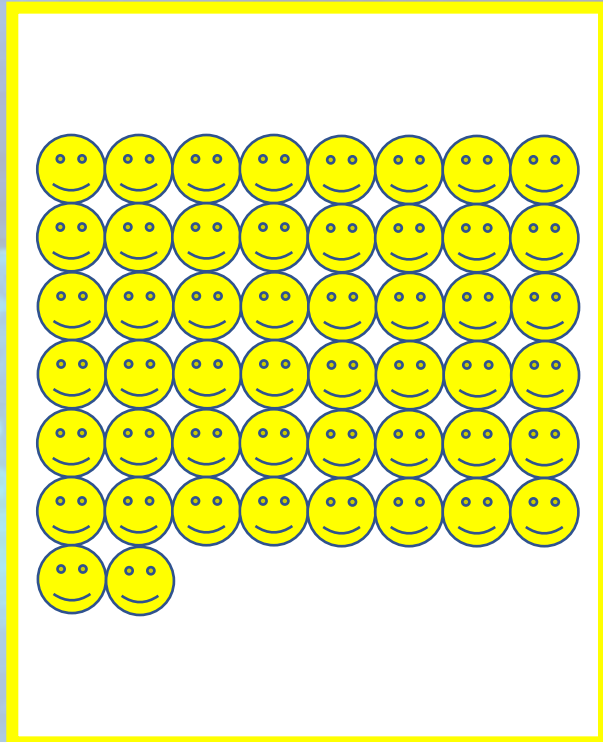
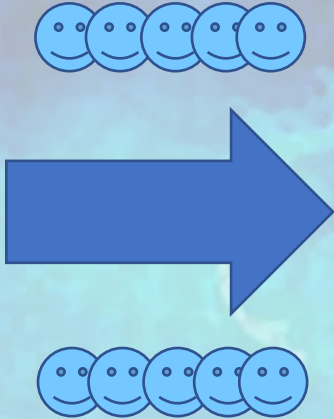


**10**

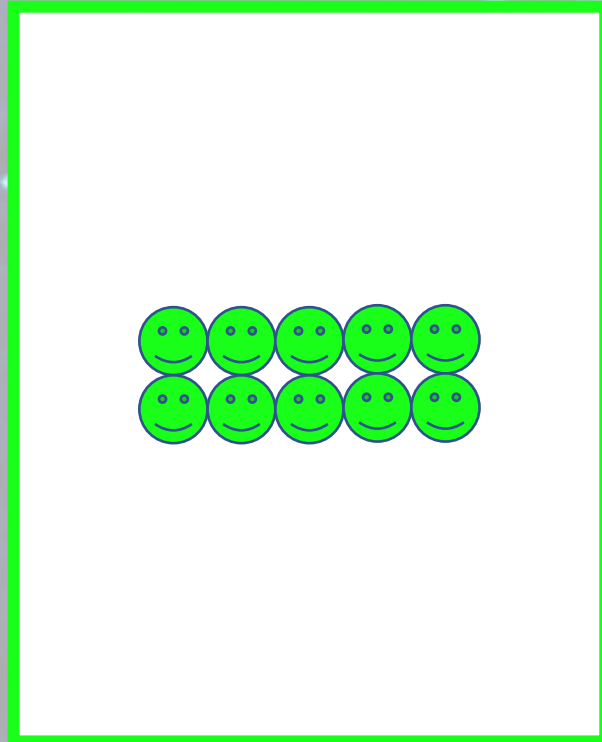




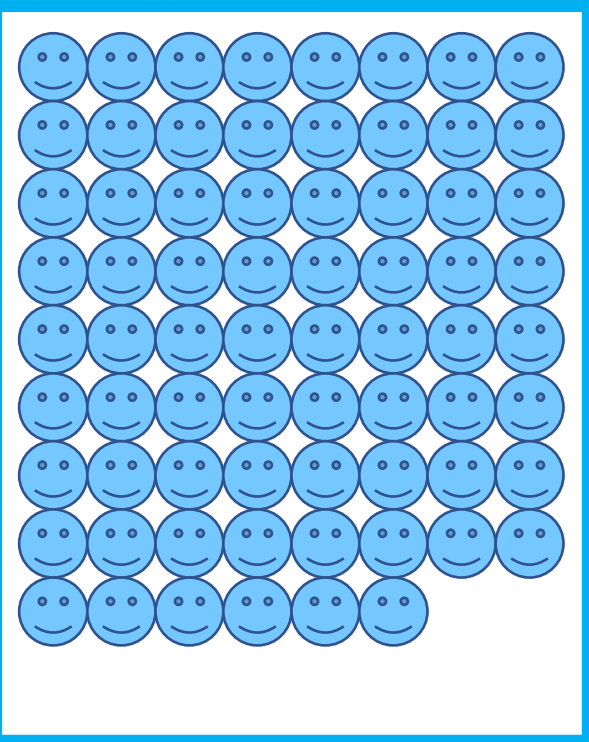
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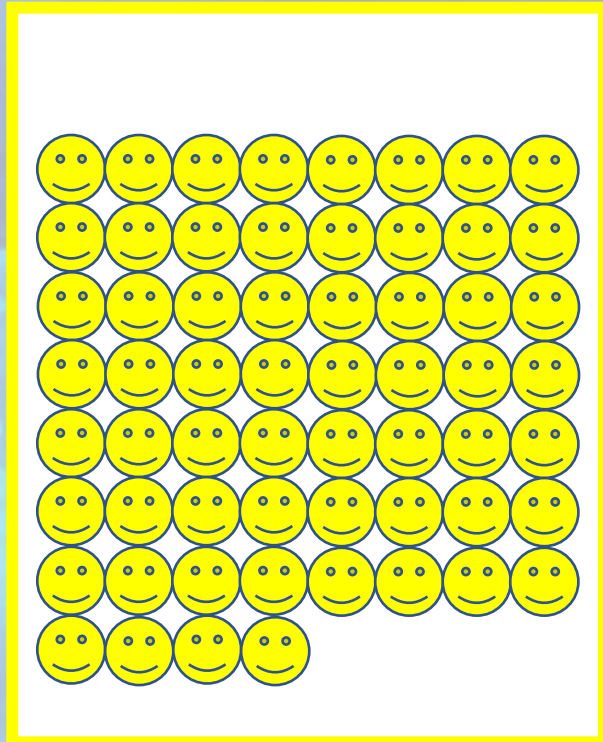
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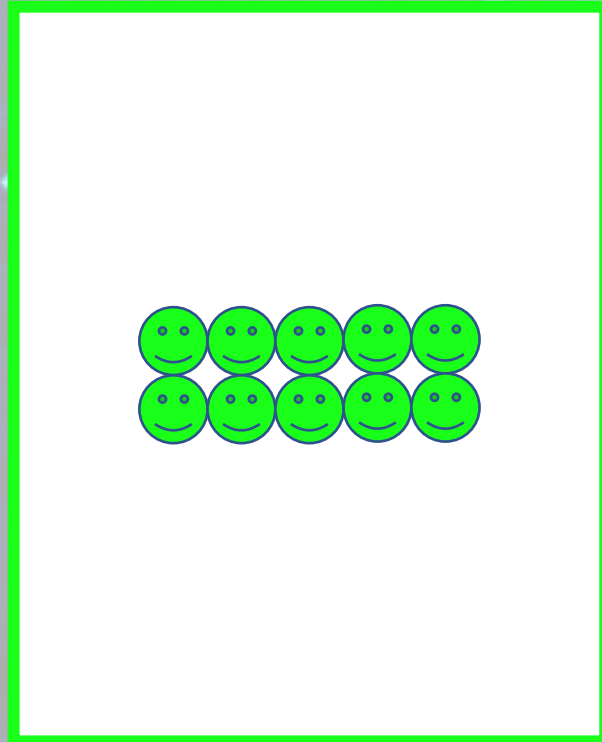
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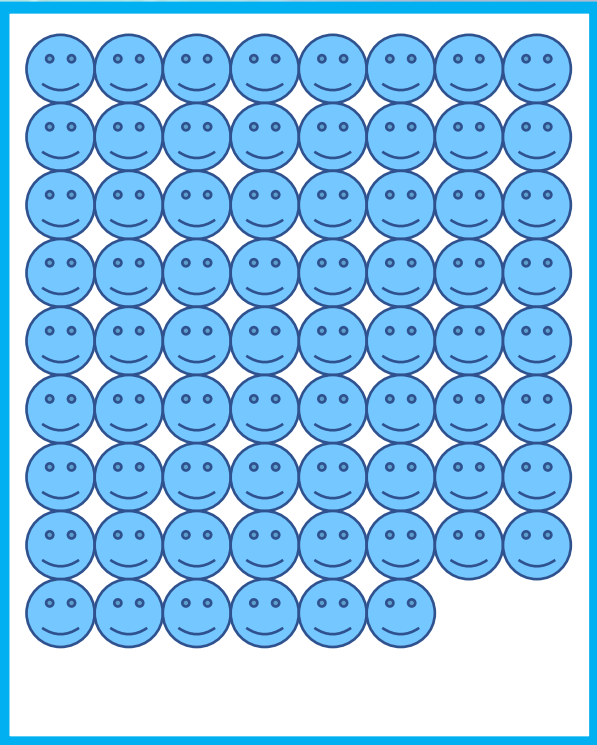
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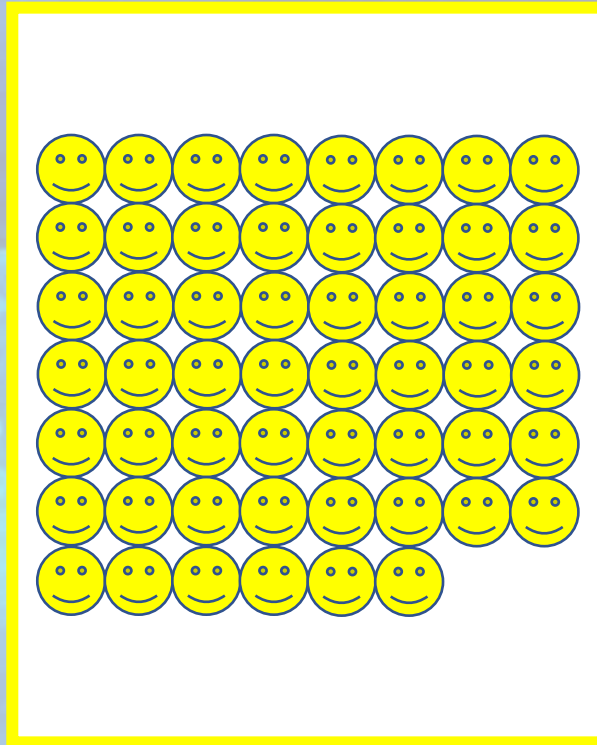
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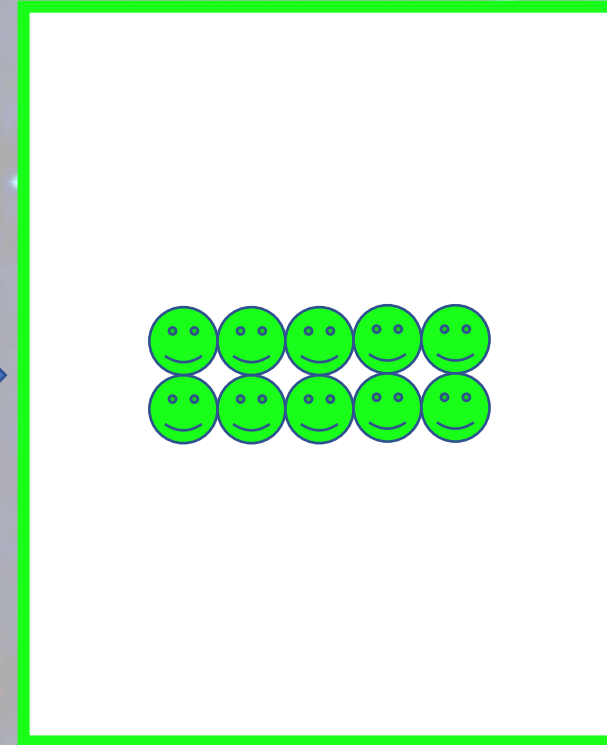
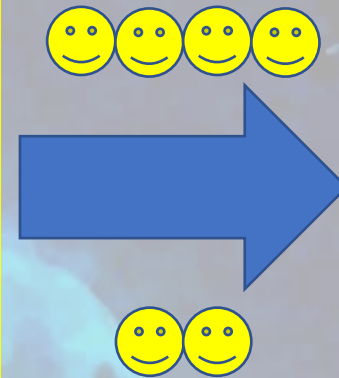
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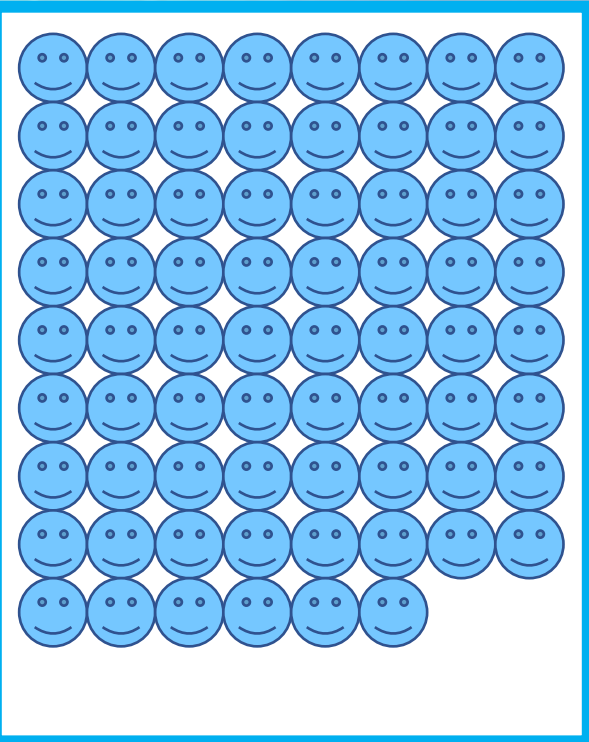


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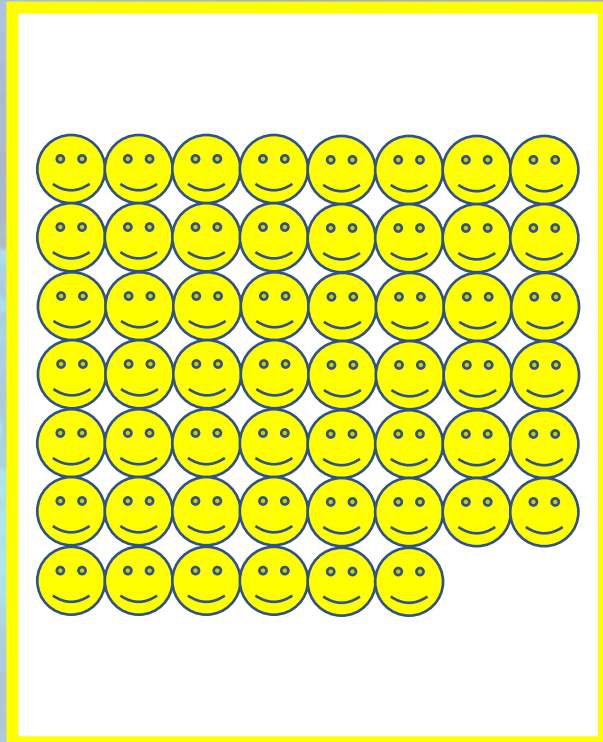


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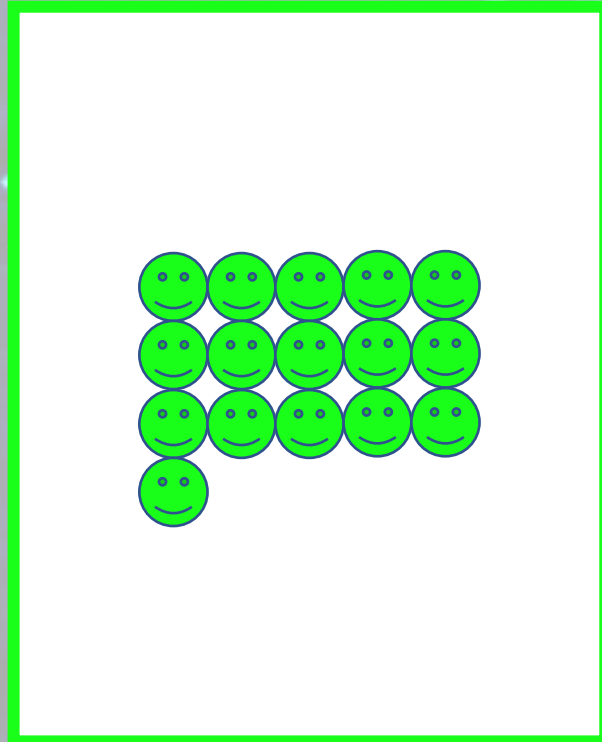




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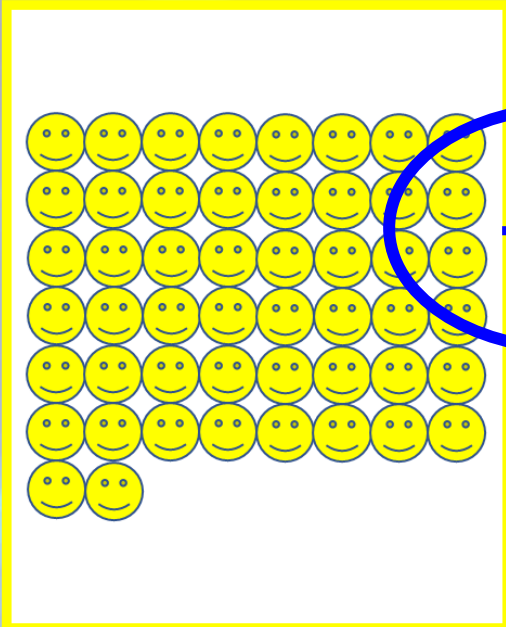
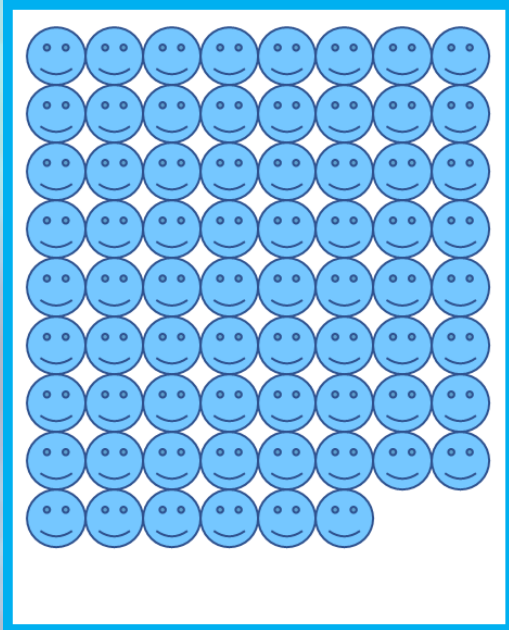
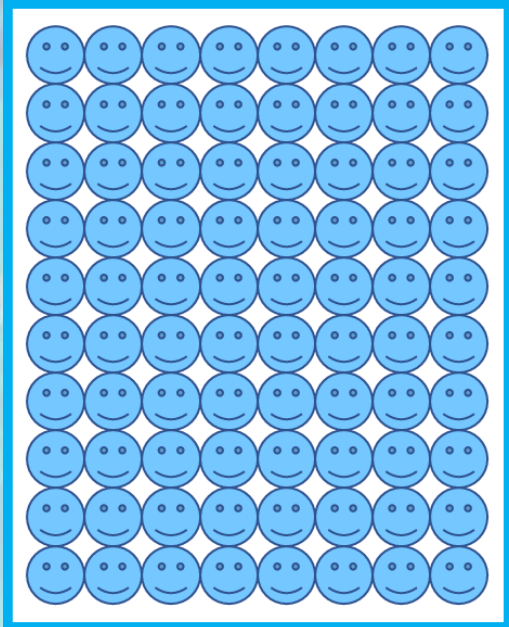


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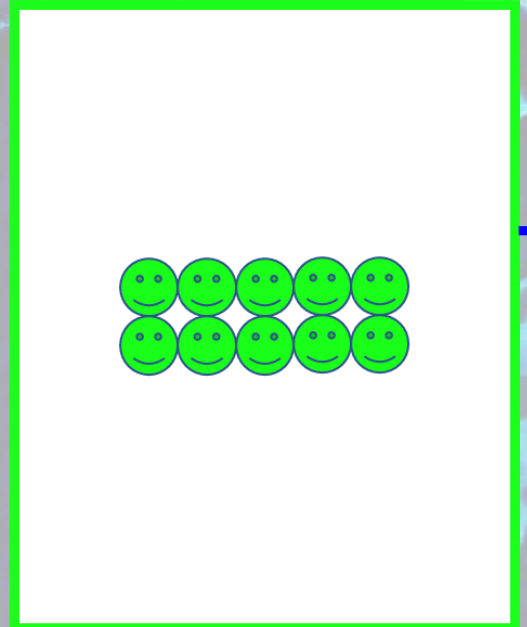


16

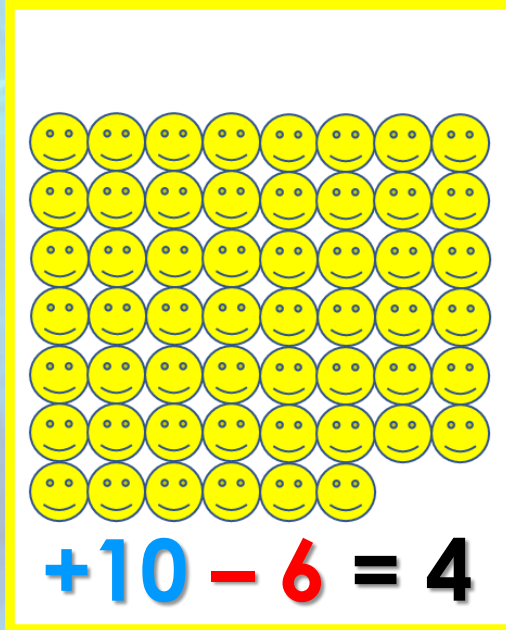
- 10



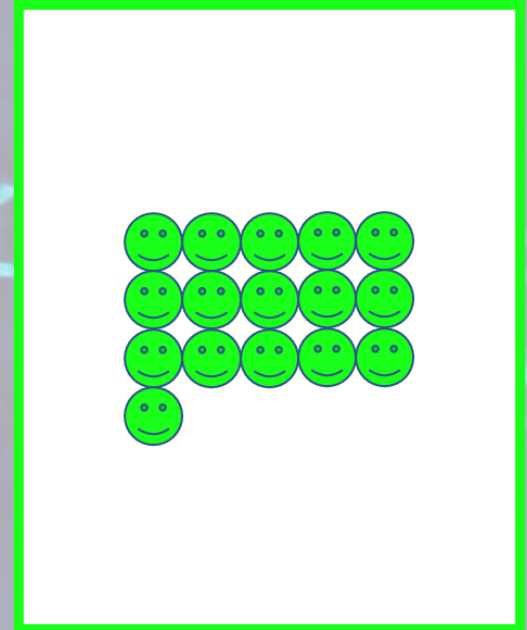
+ 4

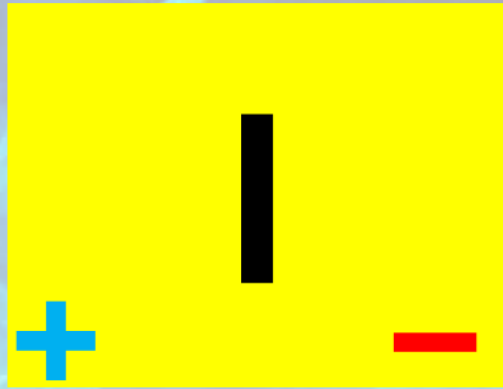
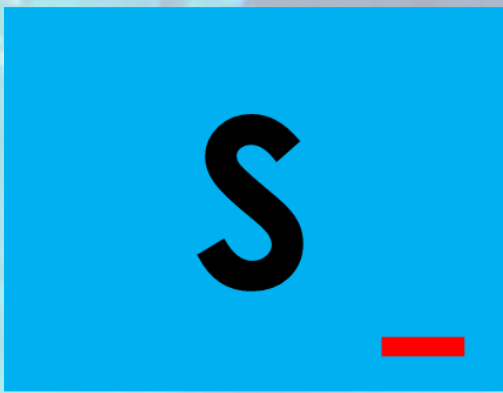


+ 6



$$+10 - 6 = 4$$





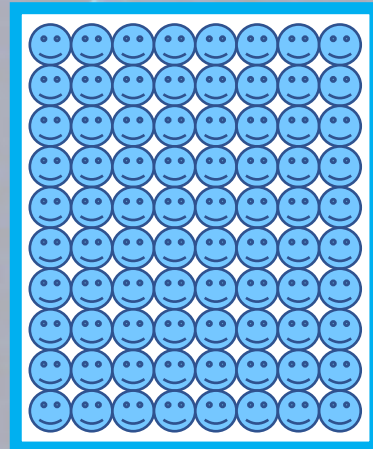
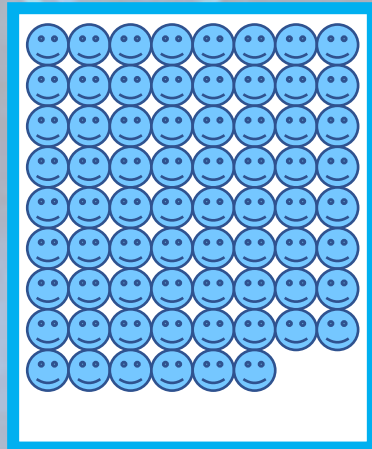
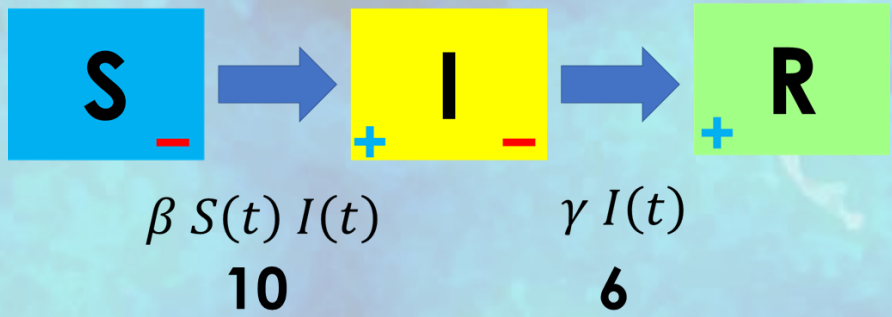
$$\beta S(t) I(t)$$

10

$$\gamma I(t)$$

6





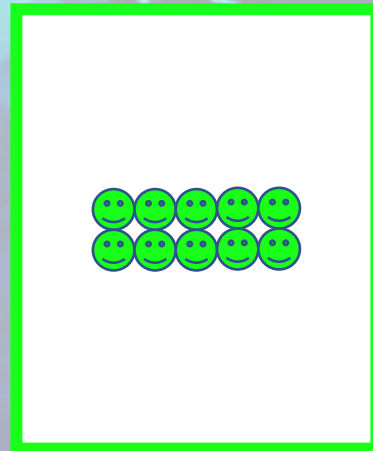
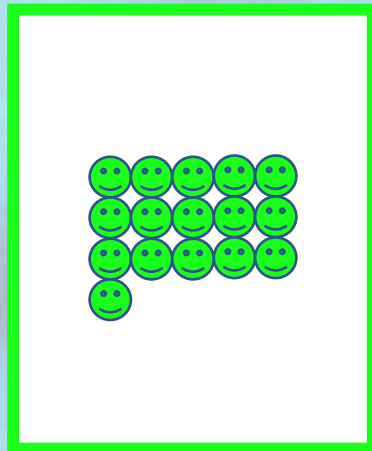
-

= -10



-

= 10 - 6



-

= 6



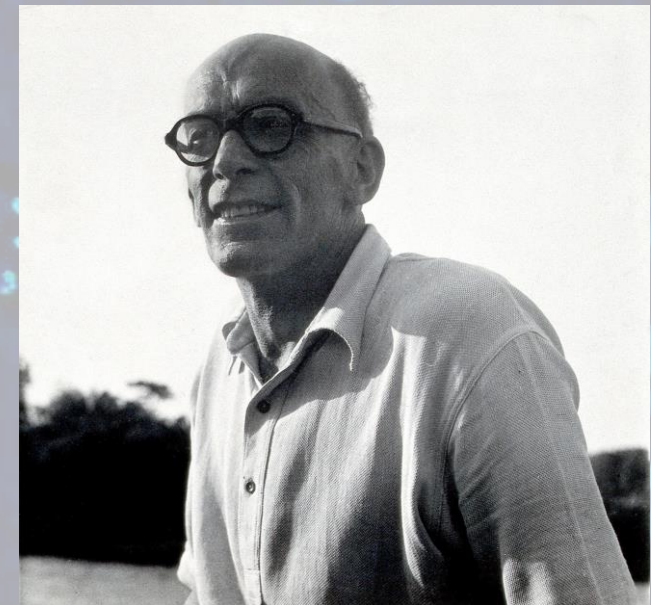
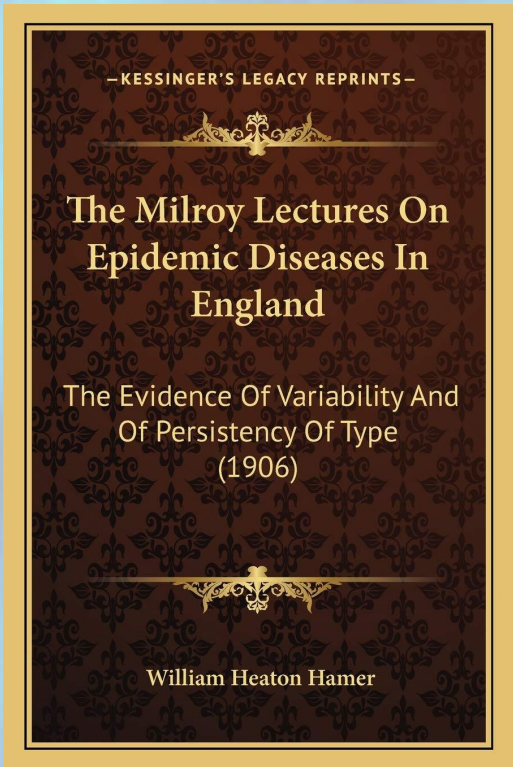
$$\beta S(t) I(t) - \gamma I(t) > 0$$



$$\beta S(t) \cancel{I(t)} - \gamma \cancel{I(t)} > 0$$

$$\beta S(t) - \gamma > 0$$

$$S(t) > \frac{\gamma}{\beta} \quad \frac{\beta}{\gamma} S(t) > 1$$





$$R_0 = \frac{\beta}{\gamma} S(t)$$

$R_t$

The background of the slide features a microscopic view of cells, likely stained with a blue and green dye. The cells are of various sizes and shapes, with some showing distinct nuclei and others appearing more irregular. The overall texture is grainy and detailed, typical of a light micrograph.

«Non lasciare mai che una crisi  
diventi un'opportunità sprecata»

(Rahm Emanuel, capo di gabinetto di Barack Obama, 2008)





Grazie per l'attenzione!