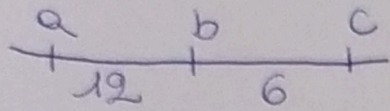


ES #1

$$P_{\text{malato}} = \frac{2}{3} \times \frac{1}{2} \times 1 \times \frac{1}{4} = \frac{1}{12} \quad P_{\text{SANO}} = \frac{11}{12}$$

$$P = 1 - \left(\frac{11}{12}\right)^4 = 0,29$$

ES #2



$$f = 0,23 ; cc = 0,47$$

$$\text{DOPPI SCAMBI} = 0,12 \times 0,06 \times 0,47 = 0,0055$$

$$\text{SC. I REG} = 0,12 - 0,0055 = 0,1145$$

$$\text{SC. II REG} = 0,06 - 0,0055 = 0,0545$$

$$\text{PARENTALI} = 1 - (0,0055 + 0,1145 + 0,0545) \\ = 1 - 0,1745 = 0,8255$$

$$\text{II} \left\{ \begin{array}{l} a\ bc / ebc = 1135 \\ a\ bc / \gamma = 1135 \\ +++ / ebc = 1135 \\ +++ / \gamma = 1135 \end{array} \right.$$

$$\text{I} \left\{ \begin{array}{l} +\ bc / ebc = 157 \\ +\ bc / \gamma = 157 \\ e\ ++ / ebc = 157 \\ e\ ++ / \gamma = 157 \end{array} \right.$$

$$\text{III} \left\{ \begin{array}{l} a\ b\ + / ebc = 75 \\ a\ b\ + / \gamma = 75 \\ ++\ c / ebc = 75 \\ ++\ c / \gamma = 75 \end{array} \right.$$

$$\begin{array}{l} a\ +\ c / ebc = 0\ \gamma \\ a\ +\ c / \gamma = 0\ \gamma \\ +\ b\ + / ebc = 0\ \gamma \\ +\ b\ + / \gamma = 0\ \gamma \end{array}$$

Es #3

a) si'

b) si'

c) no

d) si'

e) no

Es #4

$$A_1 A_1 = 250$$

$$A_1 A_2 = 2000$$

$$A_2 A_2 = 2750$$

$$p_{A_1} = \frac{(250 \times 2) + 2000}{2 \times 5000} =$$

$$= \frac{500 + 2000}{10000} = \frac{2500}{10000} = 0.25$$

$$p_{A_2} = 1 - 0.25 = 0.75$$

	0	A	$(0-A)^2/A$
<sup>11</sup> AA	250	313	12.7
<sup>12</sup> AA	2000	1875	8.33
<sup>22</sup> AA	2750	2812	1.37
			<hr/> 22.4

$$Gf = 1$$

now in equilibrium

$$p^2 = (0.25)^2 \times 5000 = 313$$

$$2pq = 2(0.25)(0.75) \times 5000 = 1875$$

$$q^2 = (0.75)^2 \times 5000 = 2812$$