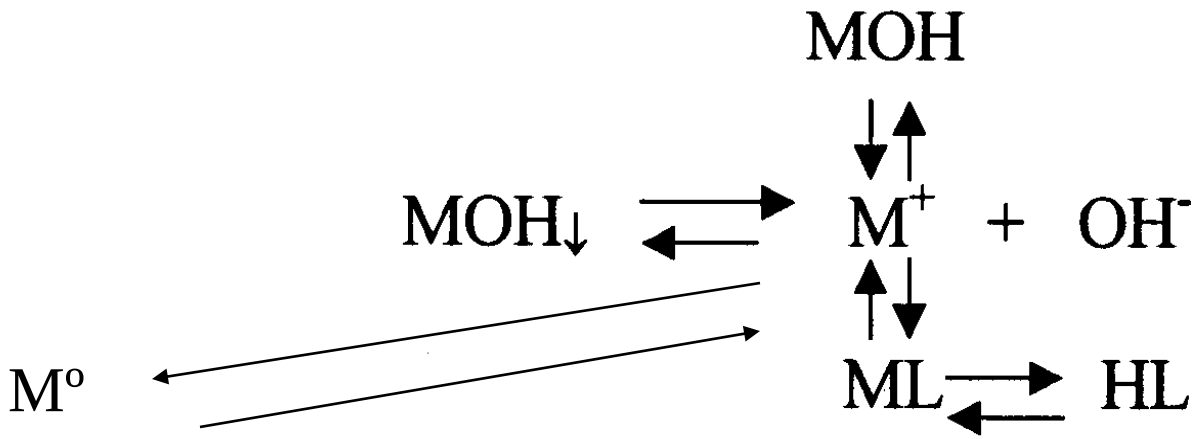
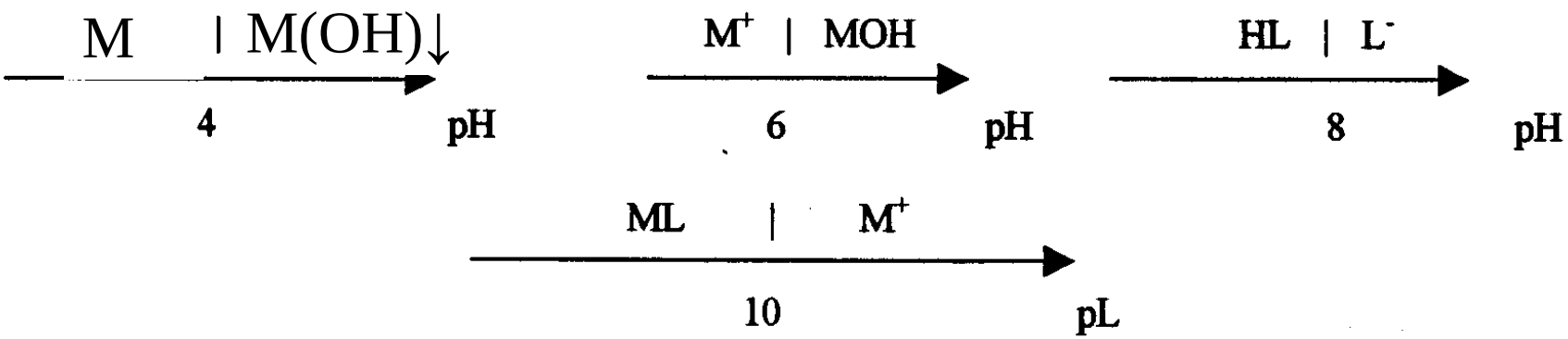
Química Analítica III
Diagramas generalizados de Predominio de Estado: DPE.

Ejemplo hipotético simple:



Los siguientes *DUZP* arrojan la información de predominios para pM =2:

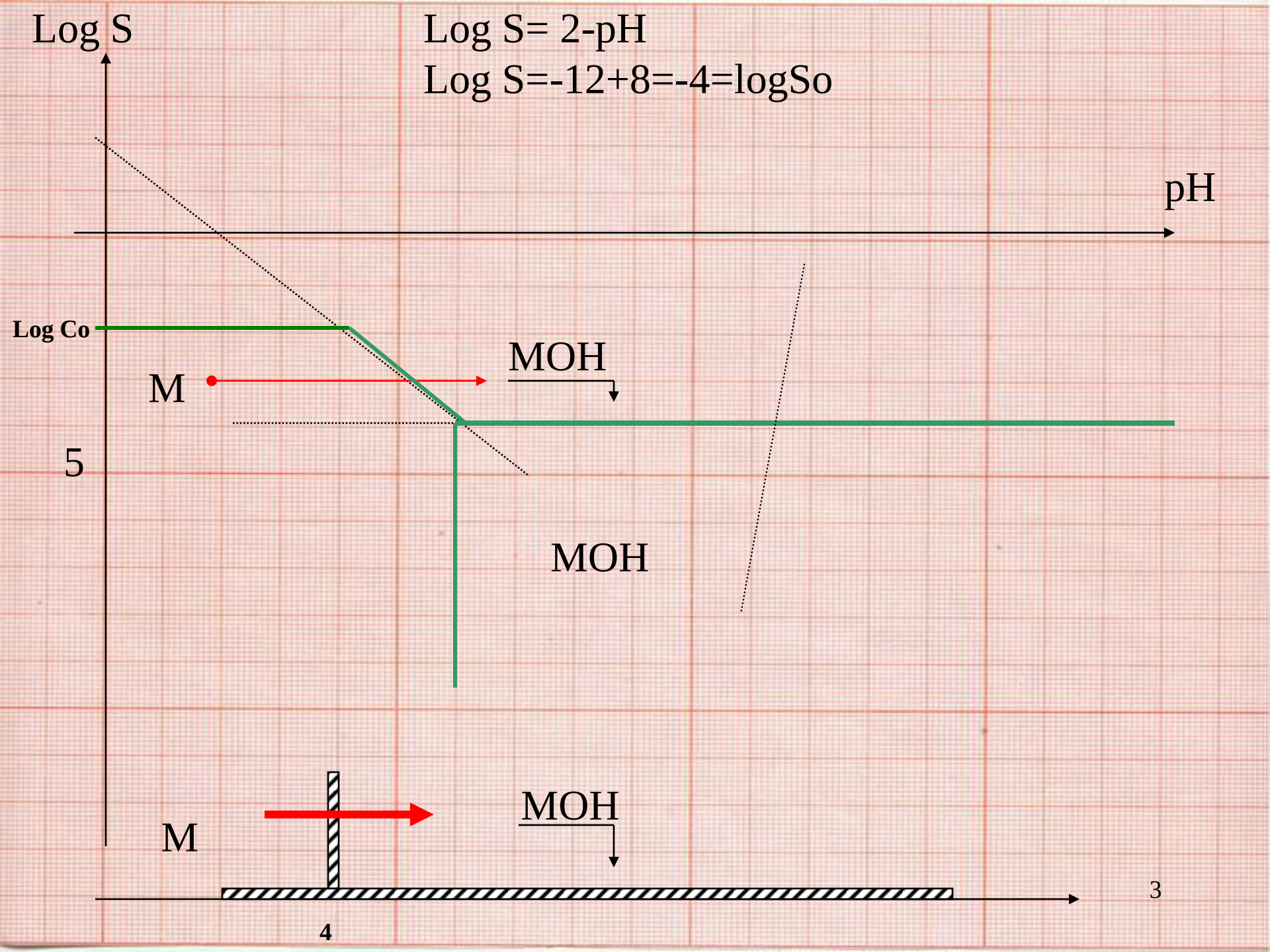


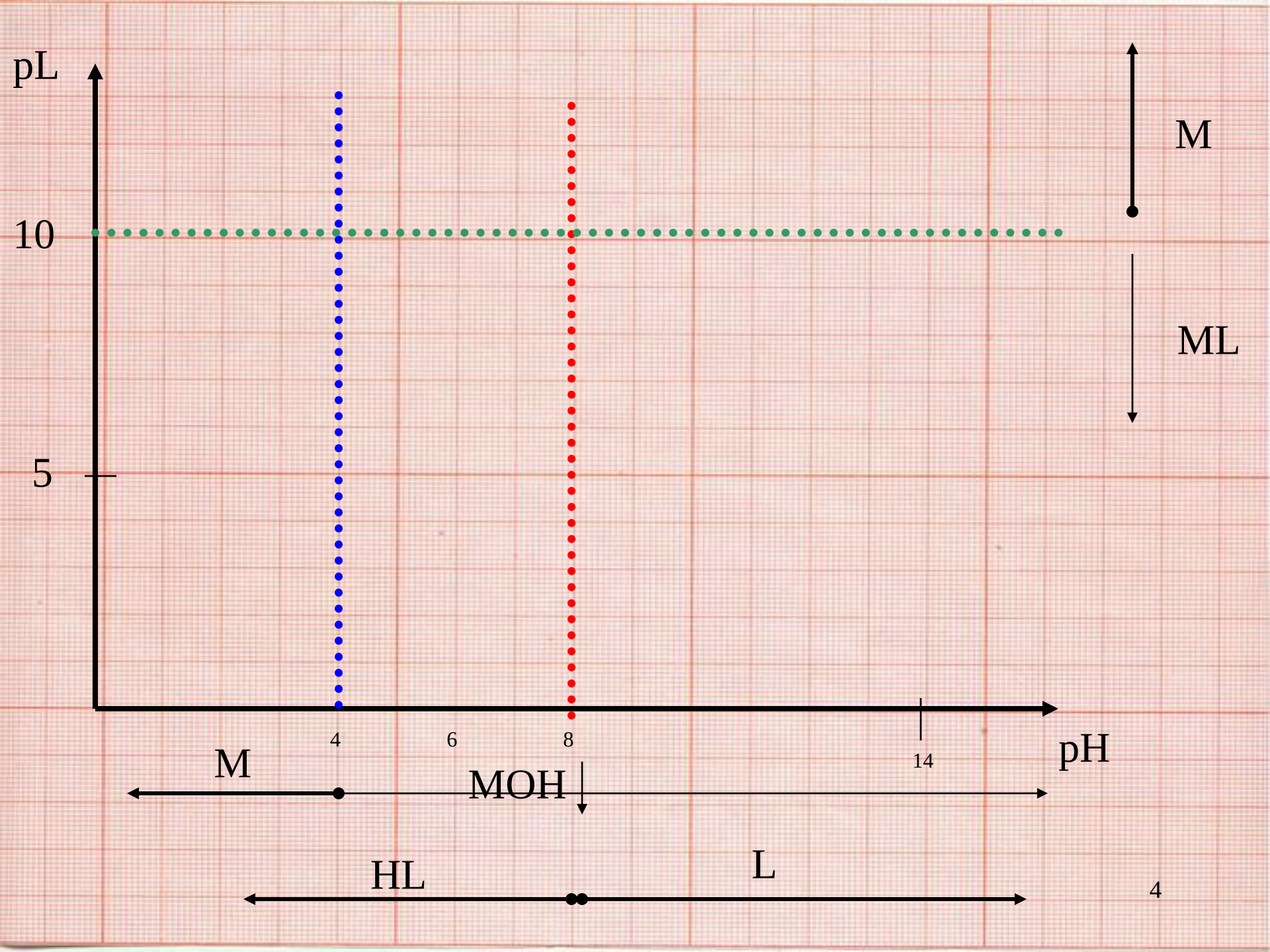
Diagramas Generalizados de Predominio de Estado

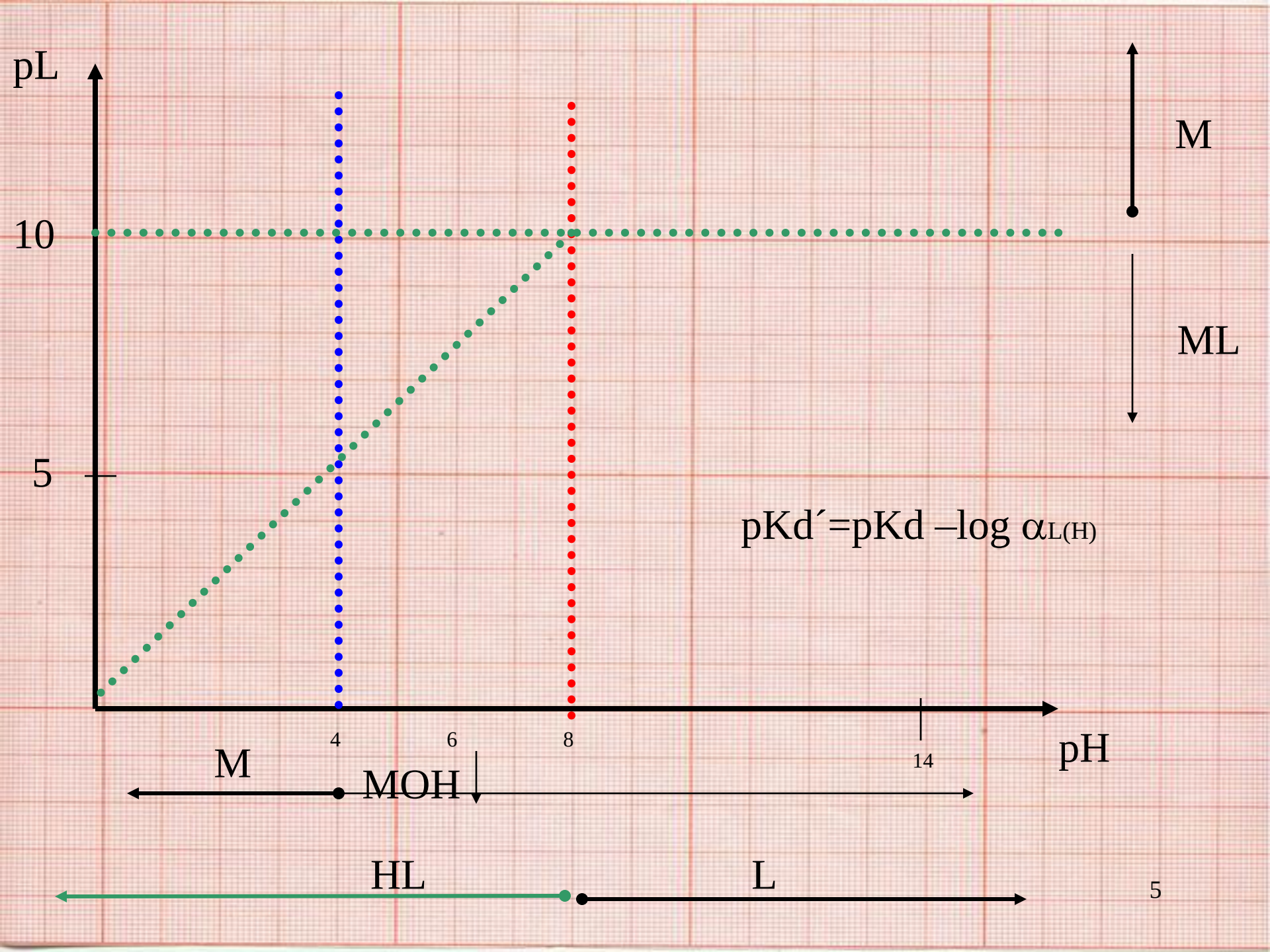
$$\log S' = f(pH)$$

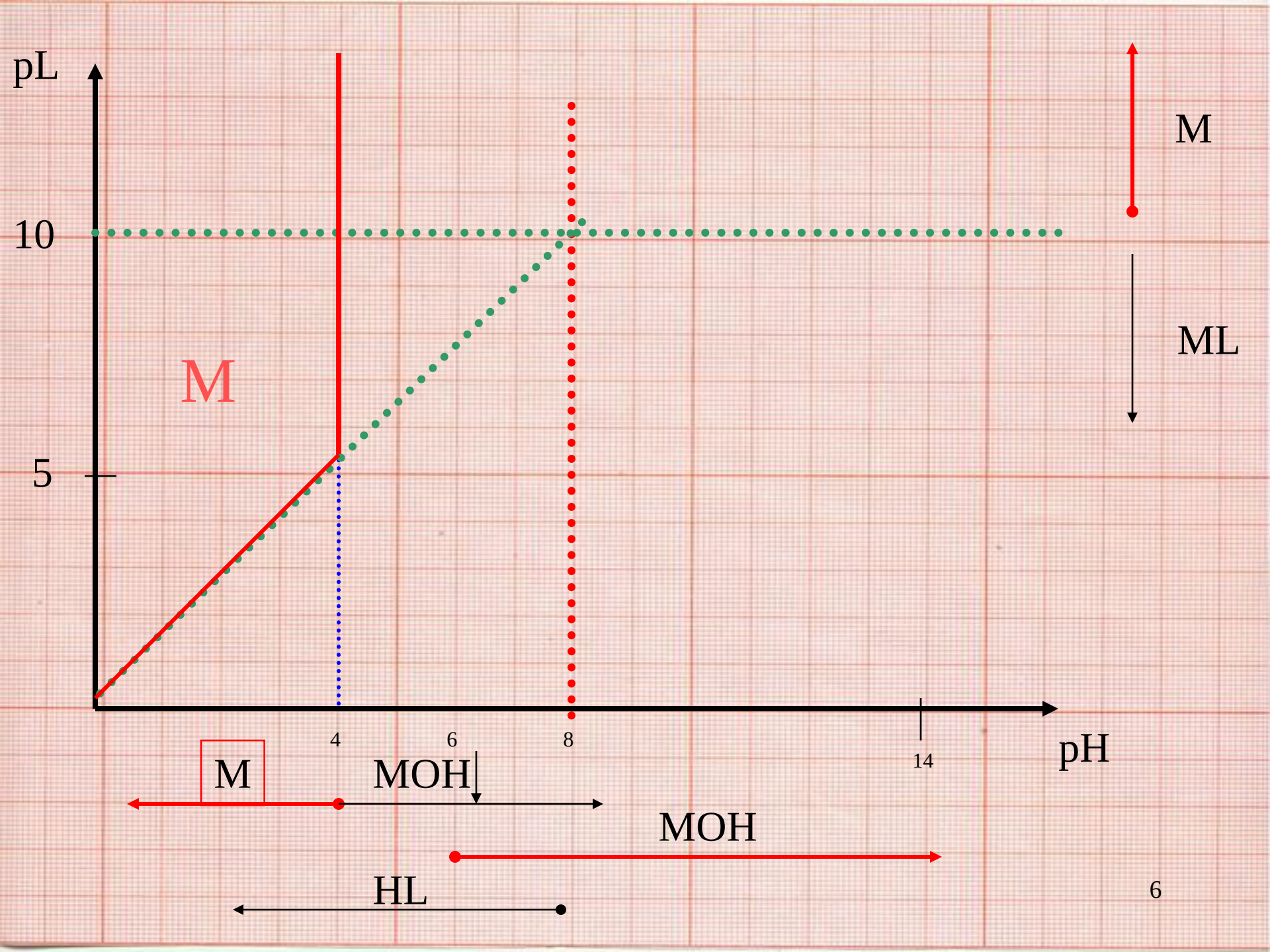
$$pL' = f(pH)_{pM}$$

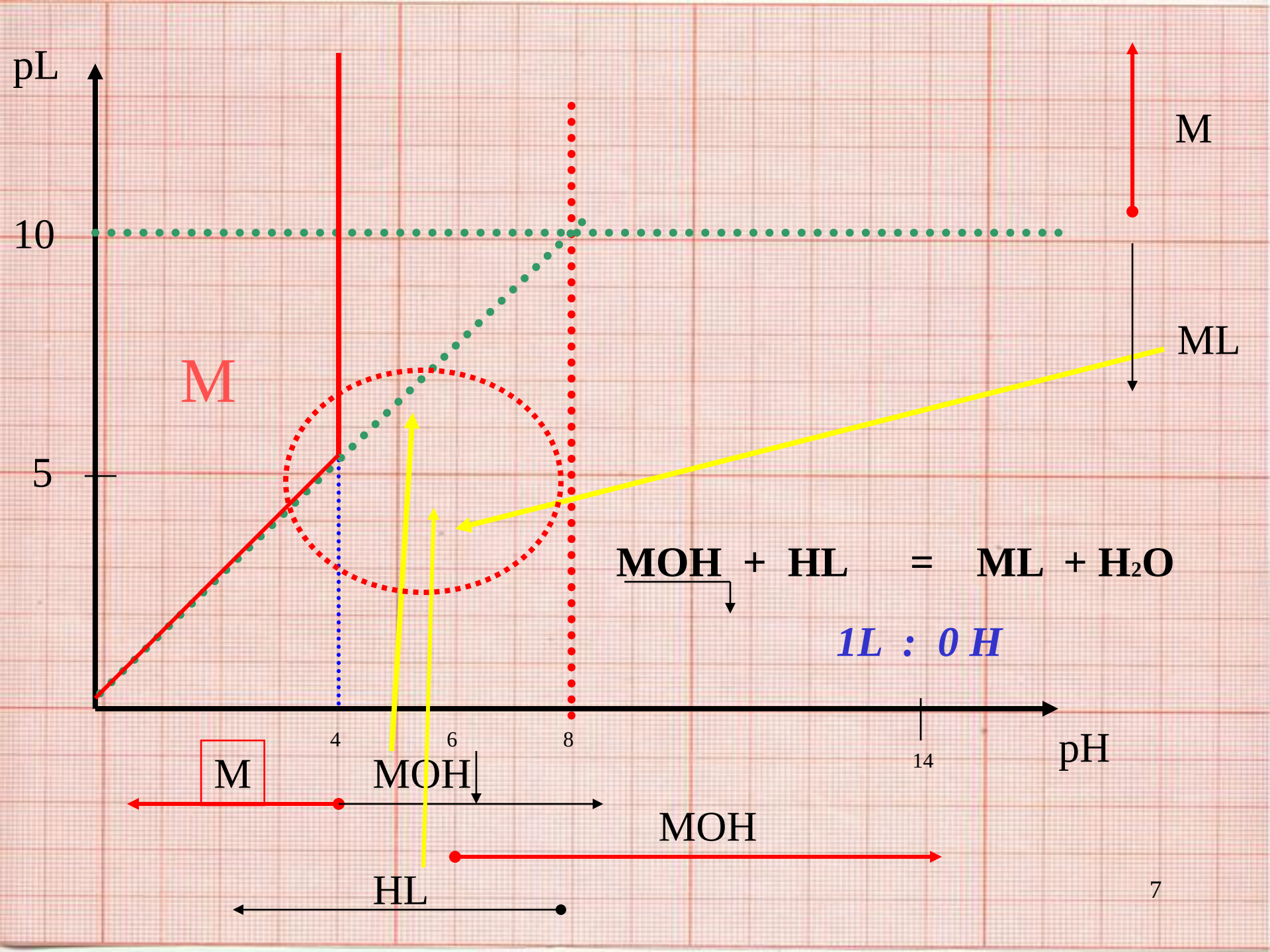
$$pe = f(pH)_{pM,pL}$$

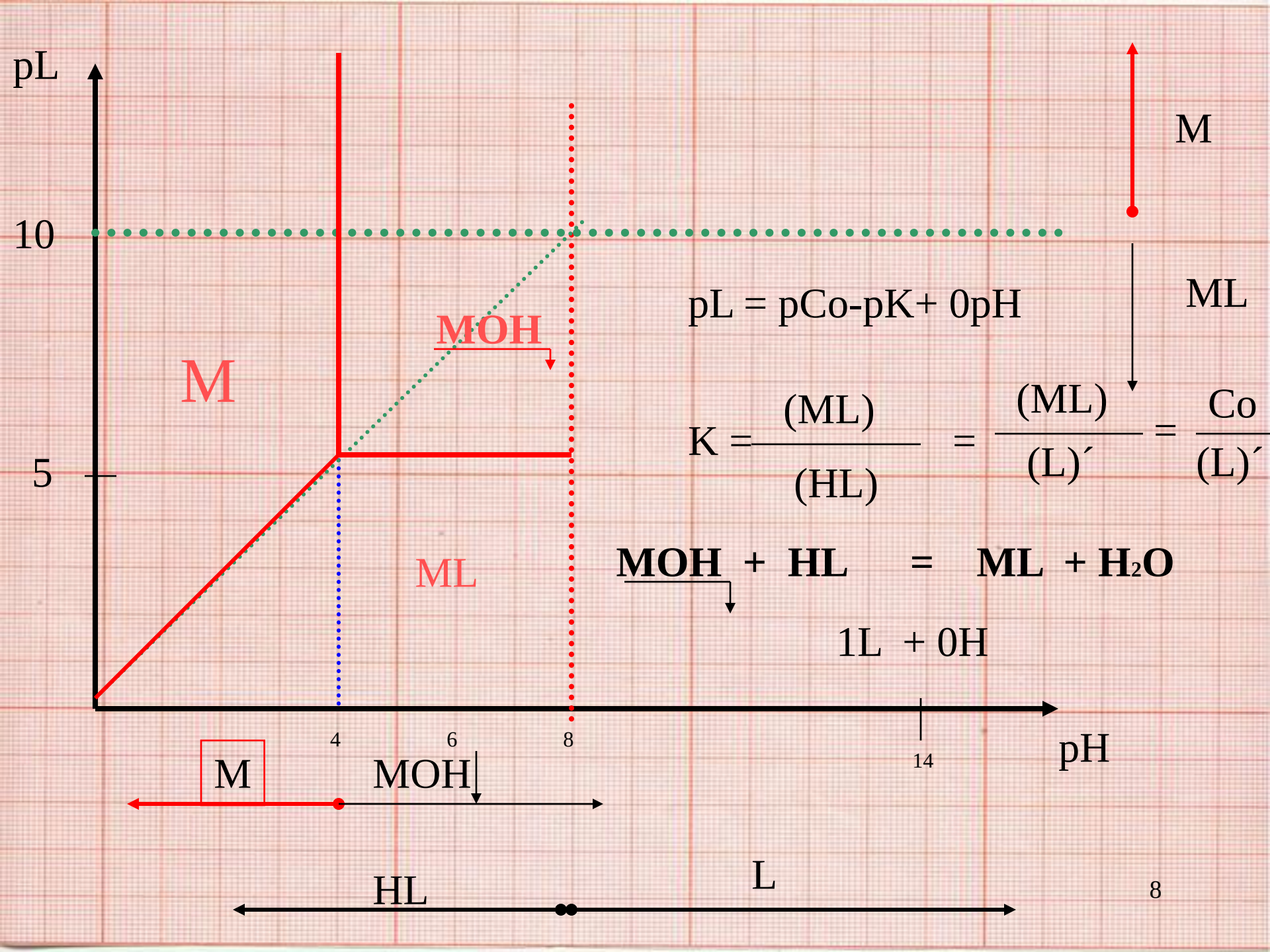

Log S
Log S= 2-pH
Log S=-12+8=-4=logSo
pH
Log Co
M
MOH
5
MOH
M
MOH
4

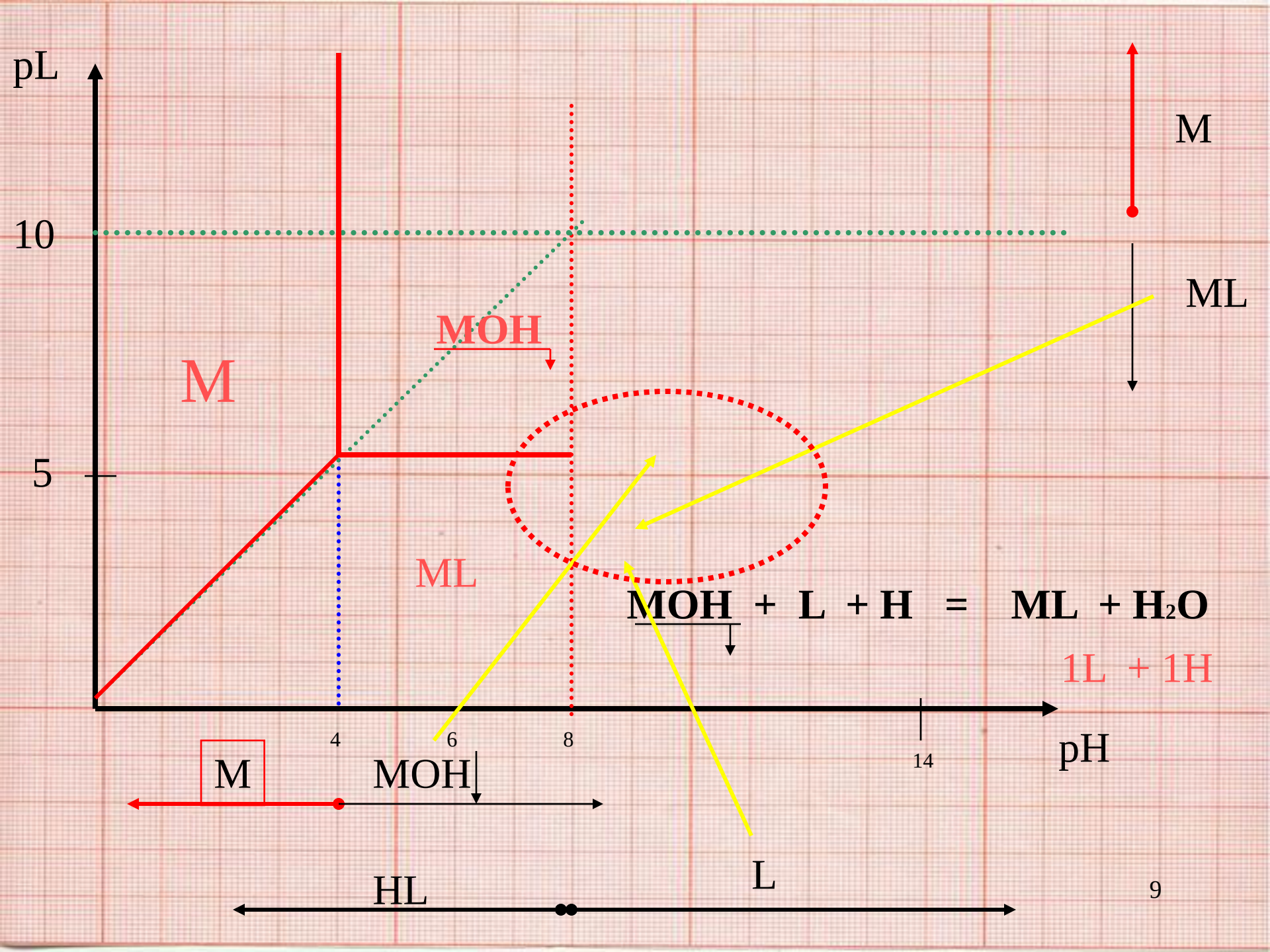

pL
10
5
M
ML
4
6
8
14
pH
M
MOH
HL
L


pL
10
5
M
ML
pKd´=pKd –log αL(H)
4
6
8
14
pH
M
MOH
HL
L


pL
10
5
M
4
6
8
14
pH
M
ML
M
MOH
MOH
HL


pL
10
5
M
M
ML
MOH + HL = ML + H₂O
1L : 0 H
4
6
8
14
pH
M
MOH
MOH
HL


pL
10
5
M
MOH
ML
M
ML
pL = pCo-pK+ 0pH
K = (ML) / (HL) = (ML) / (L)´ = Co / (L)´
MOH + HL = ML + H₂O
1L + 0H
4
6
8
14
pH
M
MOH
HL
L


pL
10
5
M
MOH
M
ML
ML
MOH + L + H = ML + H₂O
1L + 1H
4
6
8
14
pH
M
MOH
HL
L

MOH + L + H = ML + H_2O

$$K = \frac{(ML)}{(L)(H)} = \frac{Co}{(L)(H)}$$

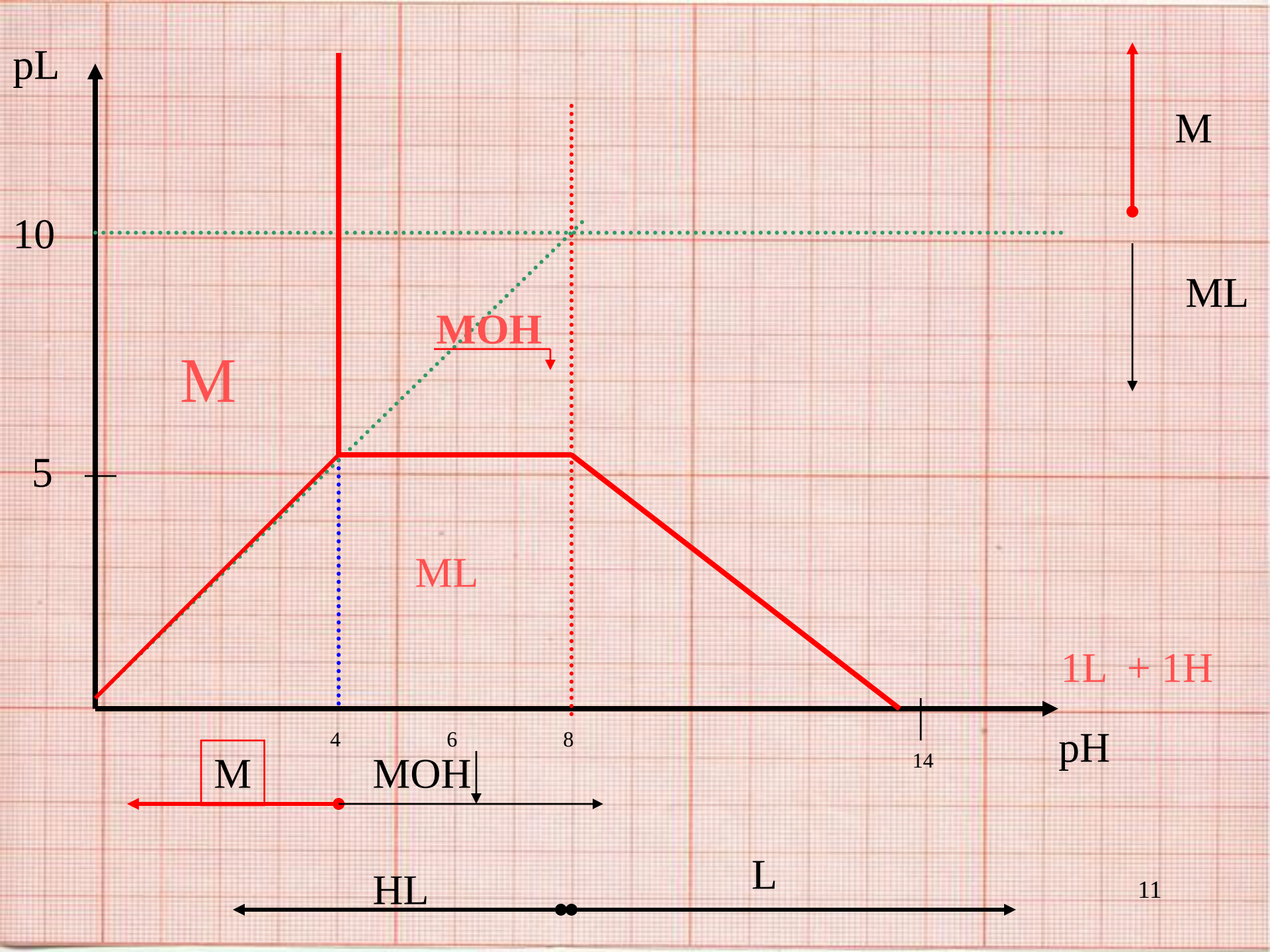
$$(L) = \frac{Co}{K\ (H)}$$

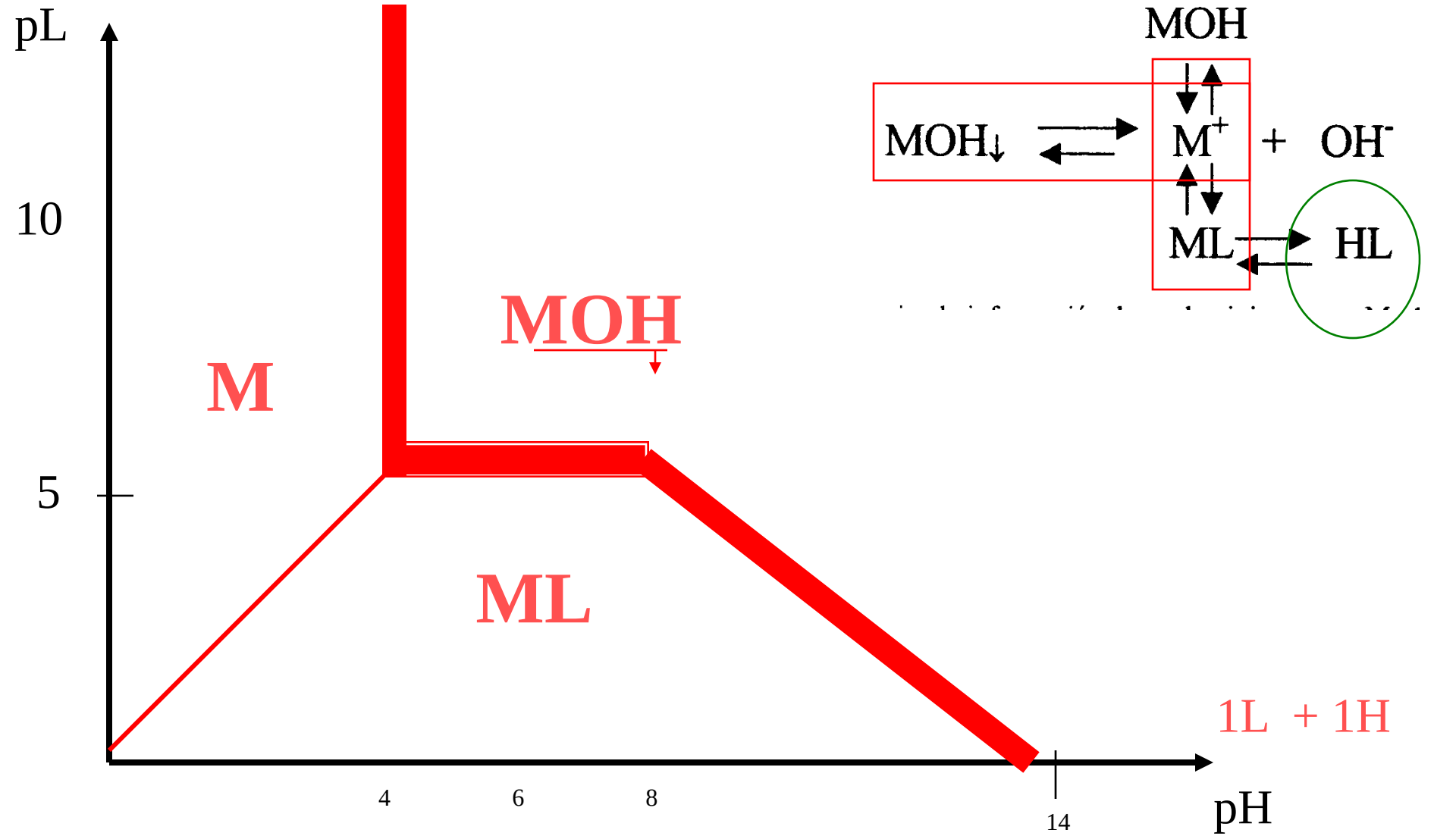
Log (L) = -logK+log Co –log (H)

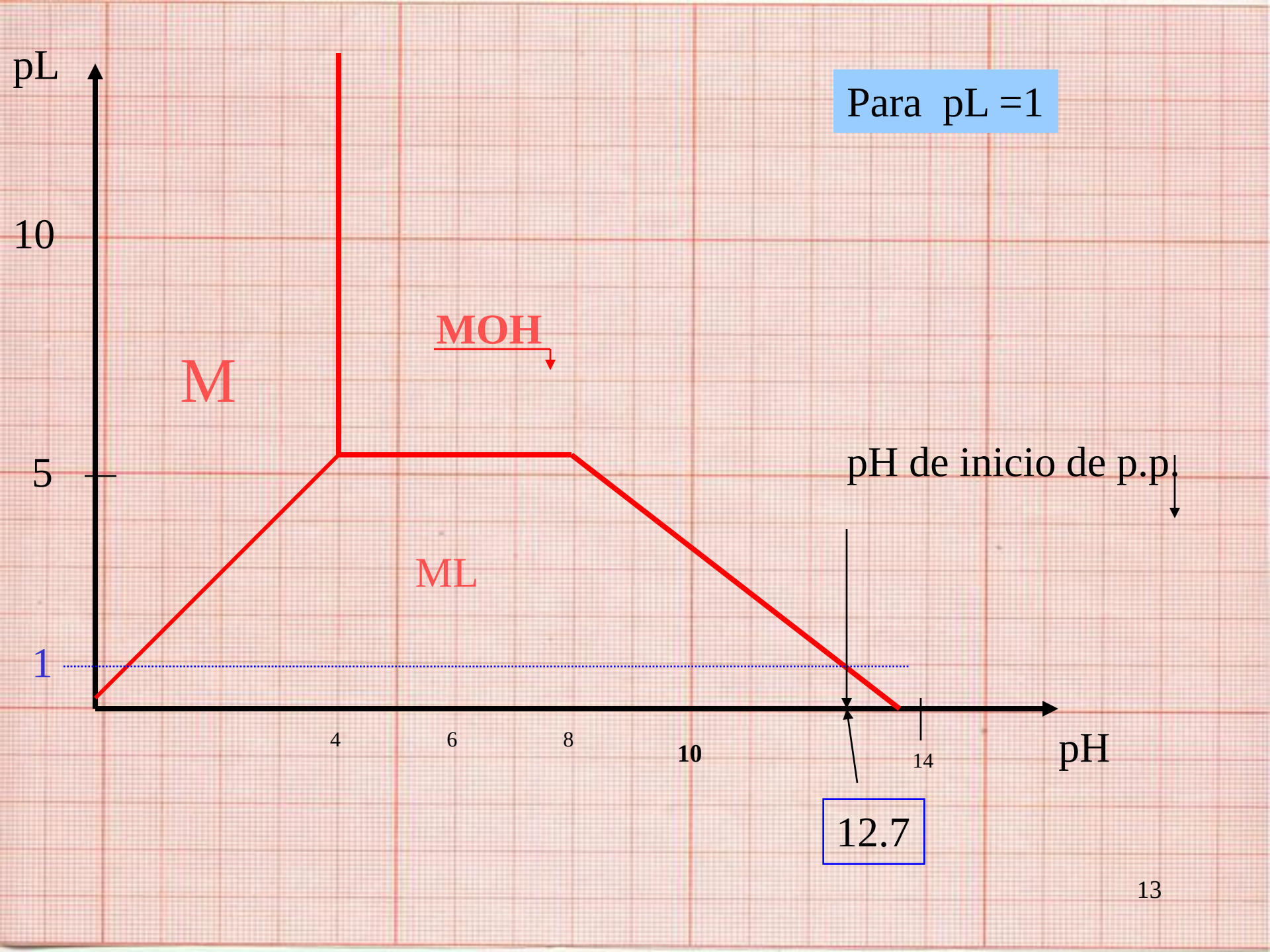
-log(L)=log K –log Co +log(H)

pL =-pK +pCo –(-log(H)) = -pK+pCo -pH

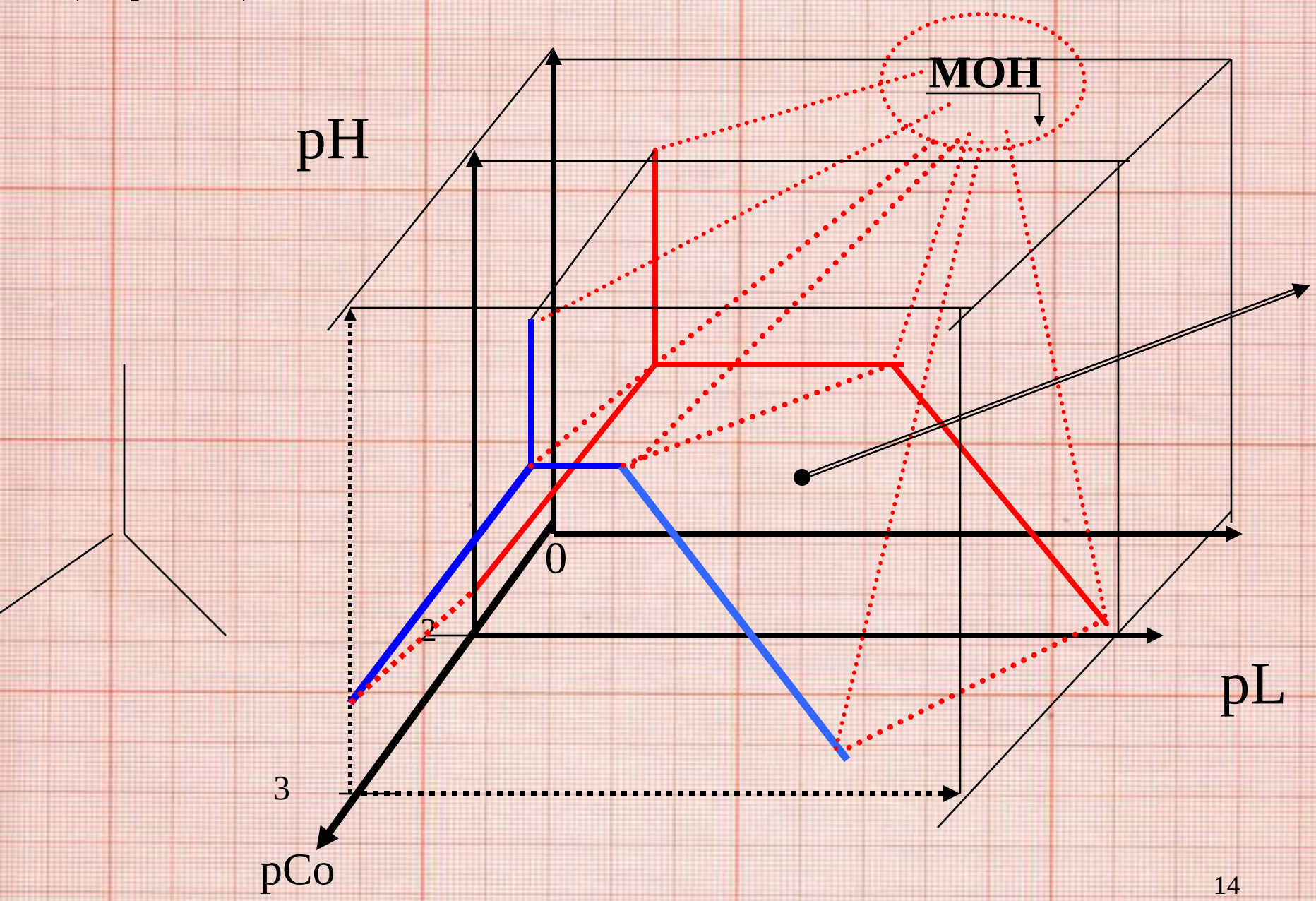
pL= f(pH) m= -1


pL
10
5
M
MOH
ML
M
ML
1L + 1H
4
6
8
14
pH
M
MOH
HL
L


pL
10
5
M
MOH
ML
4
6
8
14
pH
1L + 1H
MOH
MOH↓
M+
+ OH-
ML
HL


pL
10
5
1
M
MOH
ML
Para pL =1
pH de inicio de p.p.
4
6
8
10
14
pH
12.7

(esquema)



UNIVERSIDAD NACIONAL AUTONOMA
DE MEXICO

FACULTAD DE QUIMICA

PROCESOS DE REACCION DEL SISTEMA
Cr(III)/Cr(II) EN MEDIOS DE REACCION ANOXICOS
EN CONDICIONES DE AMORTIGUAMIENTO
MULTIPLE

T E S I S

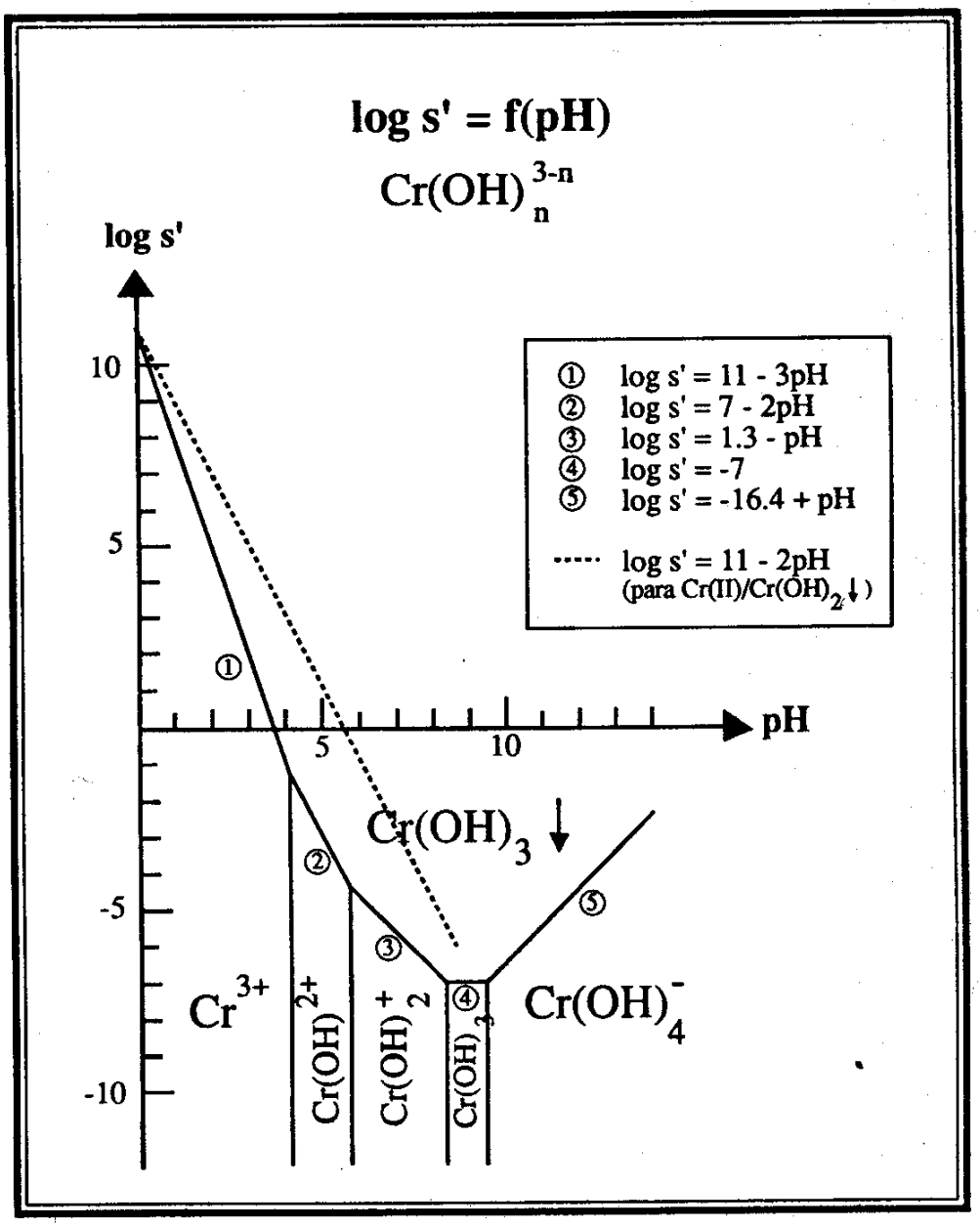
QUE PARA OBTENER EL TITULO DE:

Q U I M I C O

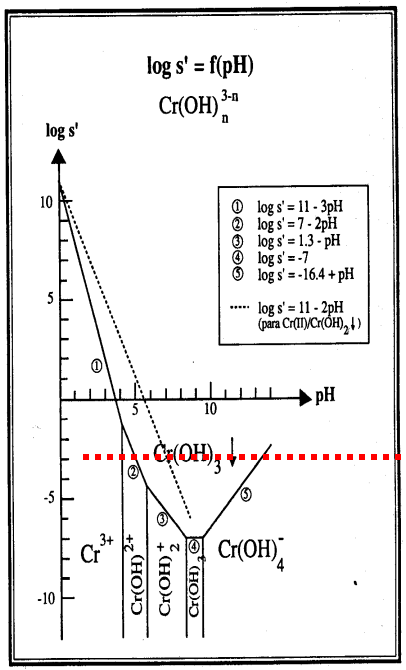
P R E S E N T A :

RAUL NOVOA CASTILLA

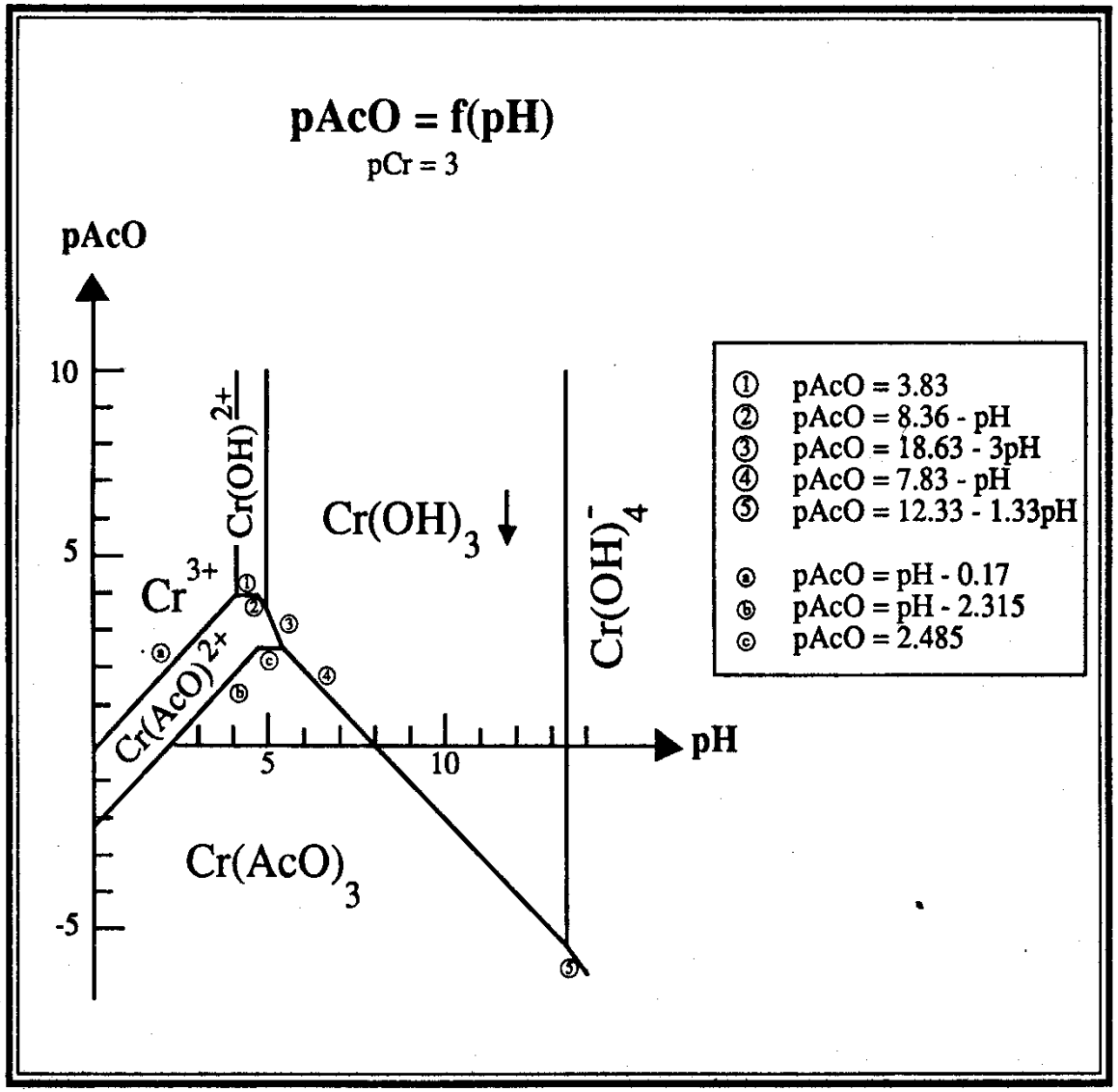
MEXICO, D. F., 1994



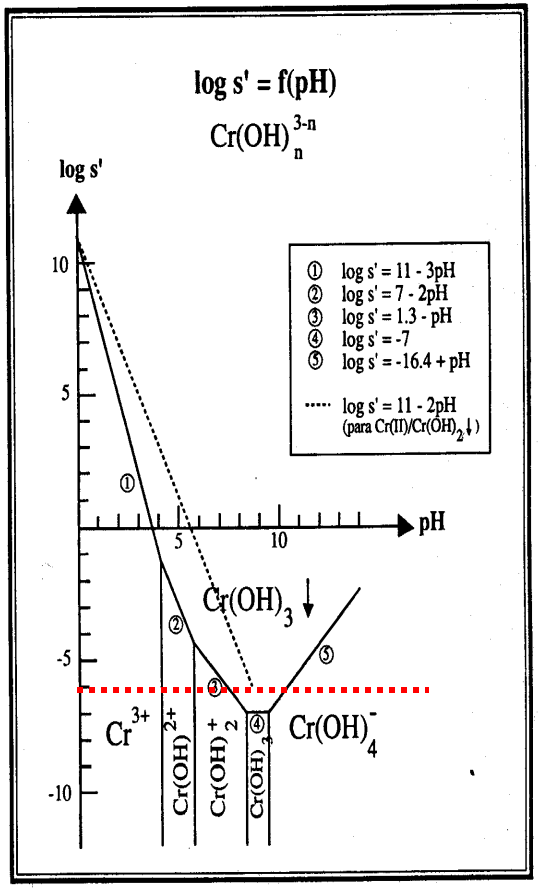
Logaritmo de la solubilidad condicional en función del pH.



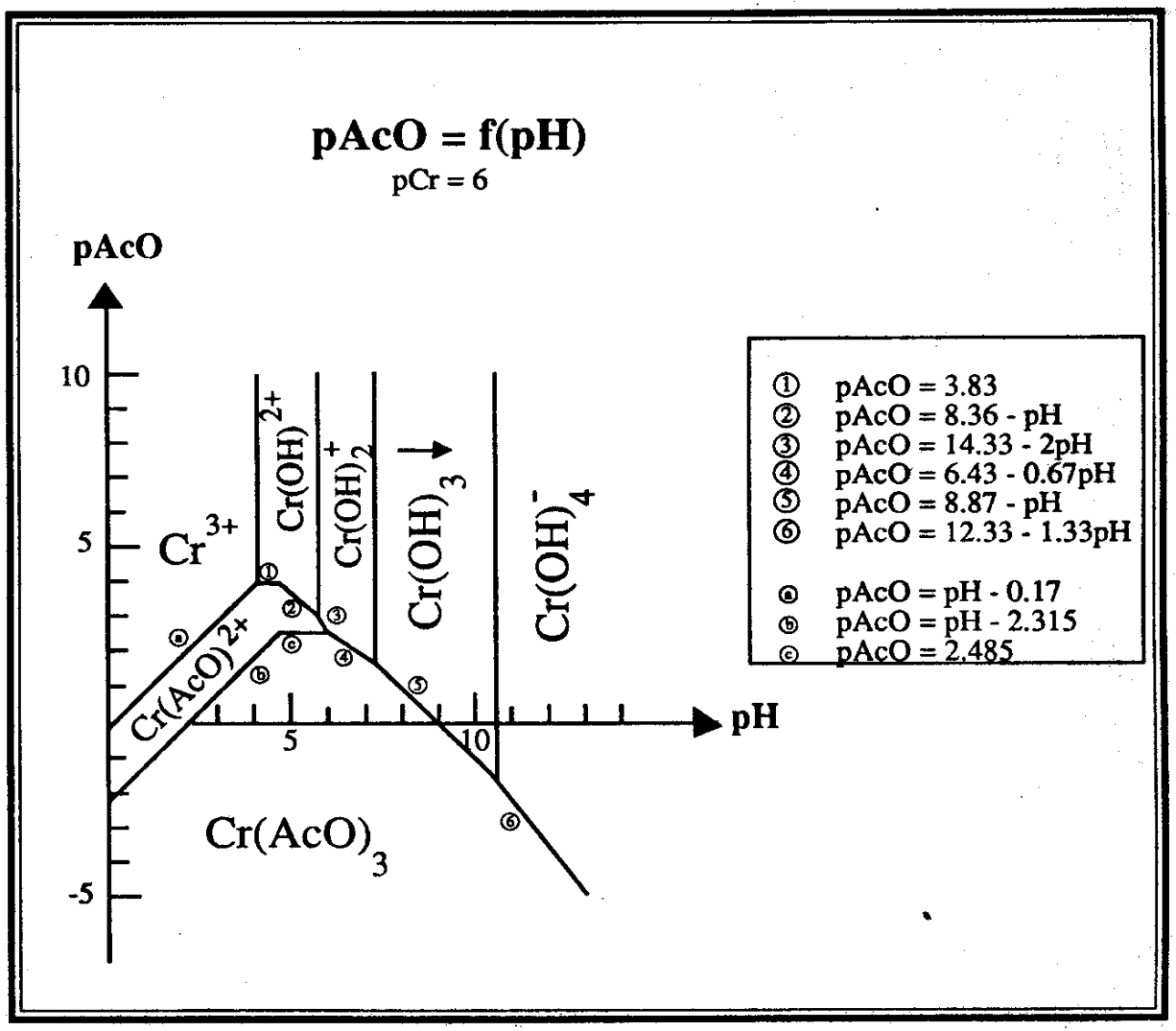
Logaritmo de la solubilidad condicional en función del pH.



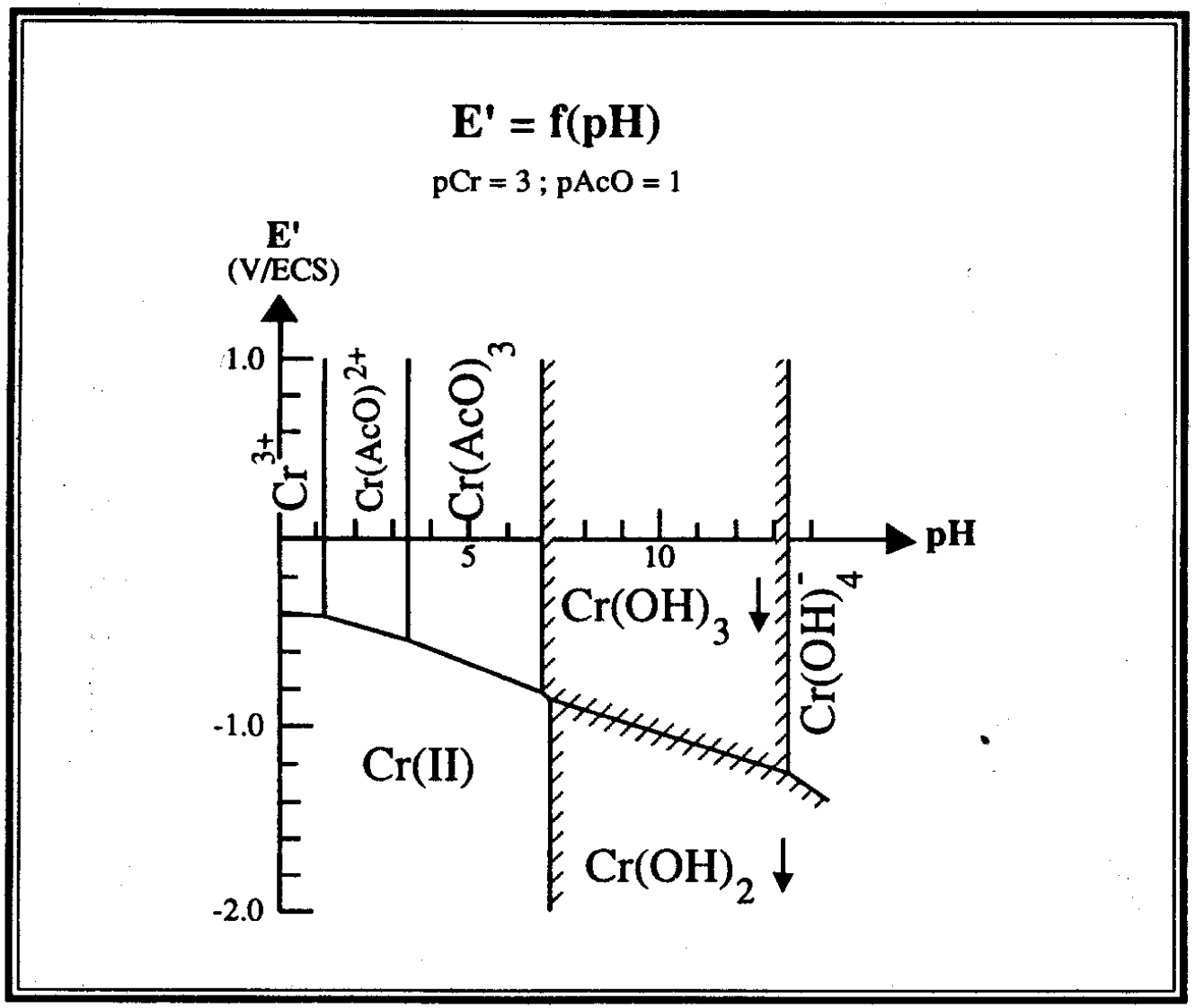
-logarítmo de la concentración de acetato en función del pH a concentración fija de Cromo (pCr=3).



Logaritmo de la solubilidad condicional en función del pH.



-logarítmo de la concentración de acetato en función del pH a concentración fija de Cromo (pCr=6).



Potencial condicional en función del pH para concentraciones fijas de Cromo (pCr=6) y Acetatos (PAcO=1).