Diagrama logarítmico de concentraciones de transición de estado: $AgCl\downarrow/AgCl_n^{1-n}$

pKs AgCl = 9.6

log β(*n*)= (*1*)3.1; (*2*)5.1; (*3*)6.1.

$AgCl\downarrow = Ag^+ + Cl^-$

$\Updownarrow$

$AgCl$

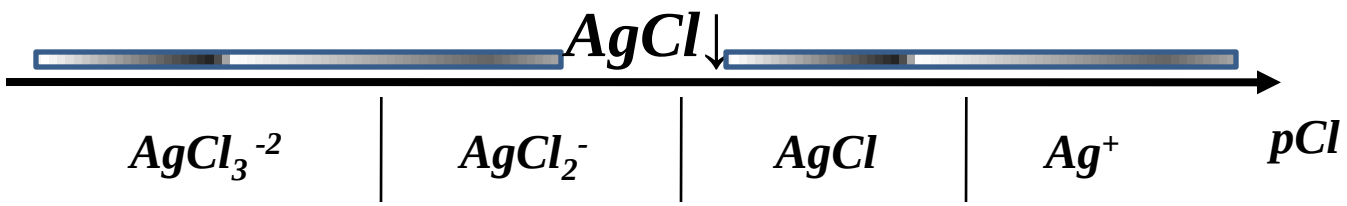
$\Updownarrow$

$AgCl_2^-$

$\Updownarrow$

$AgCl_3^{-2}$

DUPE combinado:



$$[Ag^+]' = S' = [Ag^+](1+ \Sigma\beta_i [Cl^-]^i) = [Ag^+](1+ 10^{3.1-pCl} + 10^{5.1-2pCl} + 10^{6.1-3pCl})$$

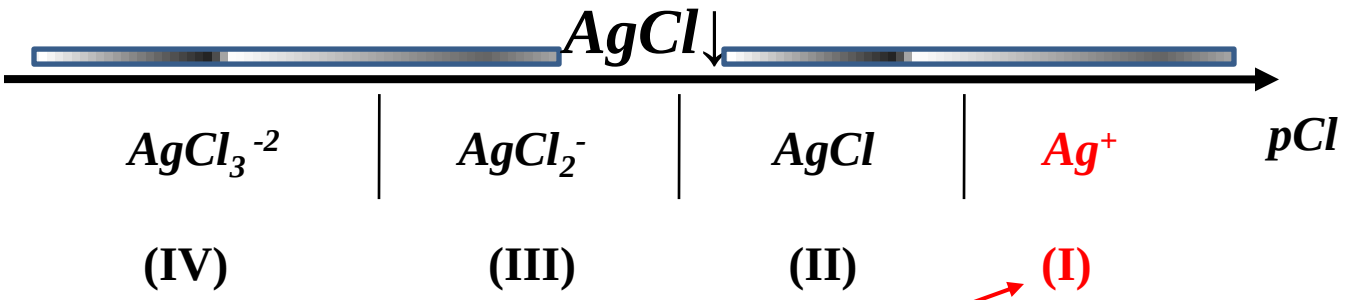
$$Ks = [Ag^+][Cl^-];$$

$$[Ag^+] = 10^{-pKs+pCl}(1+ 10^{3.1-pCl} + 10^{5.1-2pCl} + 10^{6.1-3pCl})$$

$$S' = 10^{-pKs+ pCl}(1+ 10^{3.1-pCl} + 10^{5.1-2pCl} + 10^{6.1-3pCl})$$

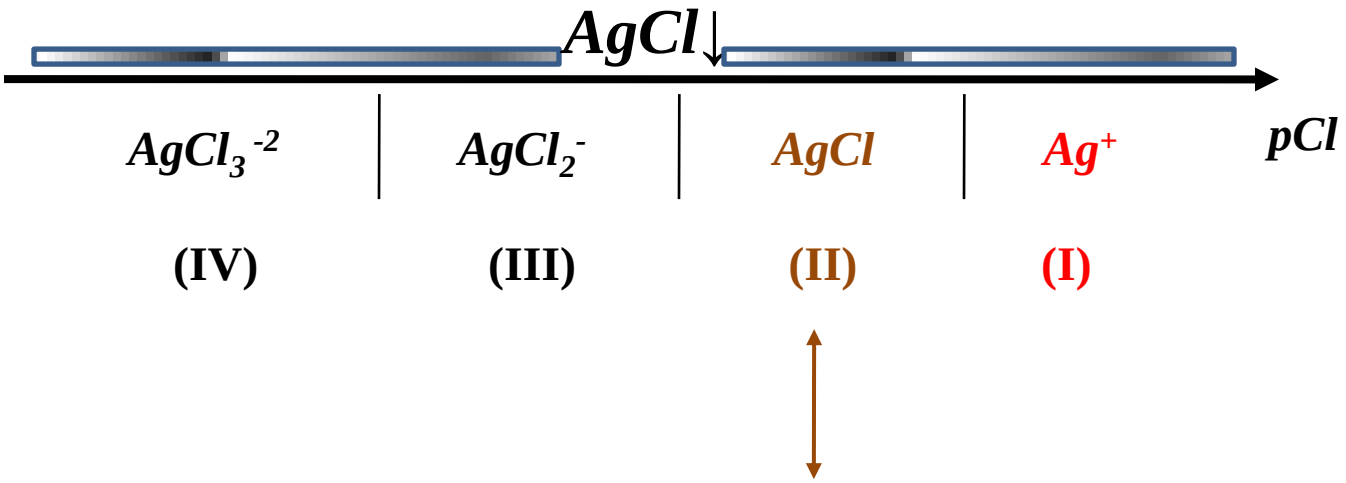
$$\log S' = -pKs + pCl + \log (1+ 10^{3.1-pCl} + 10^{5.1-2pCl} + 10^{6.1-3pCl})$$

***Reducción del polinomio por sendas zonas de predominio*:**



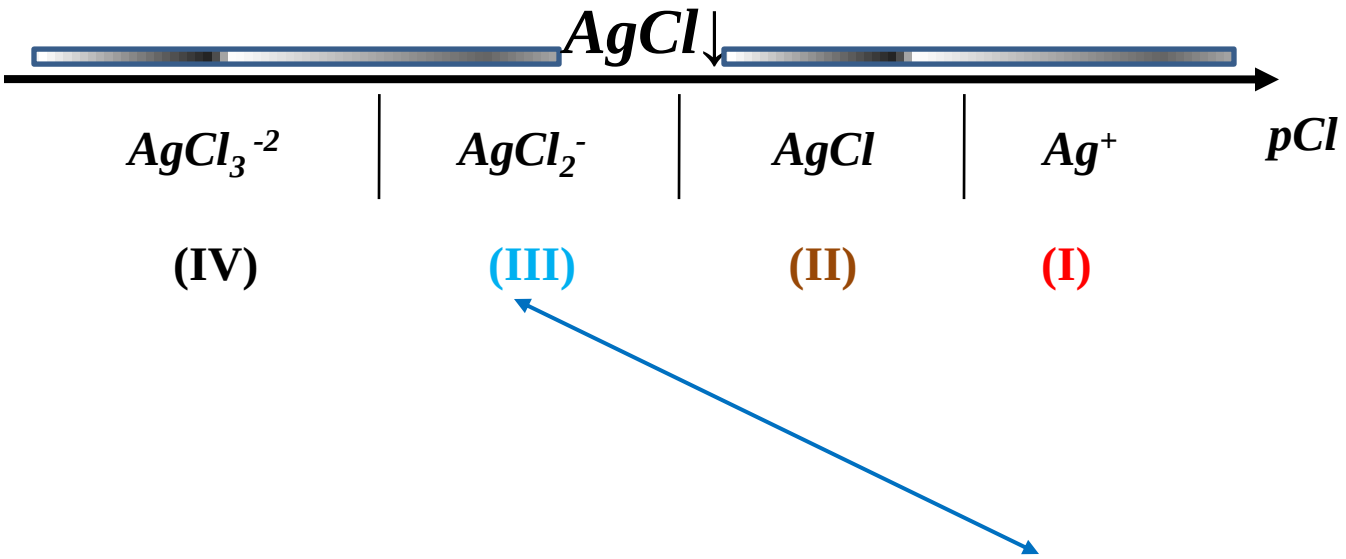
$$\log S' = -pKs + pCl + \log (1 + 10^{3.1-pCl} + 10^{5.1-2pCl} + 10^{6.1-3pCl})$$

***Reducción del polinomio por sendas zonas de predominio*:**



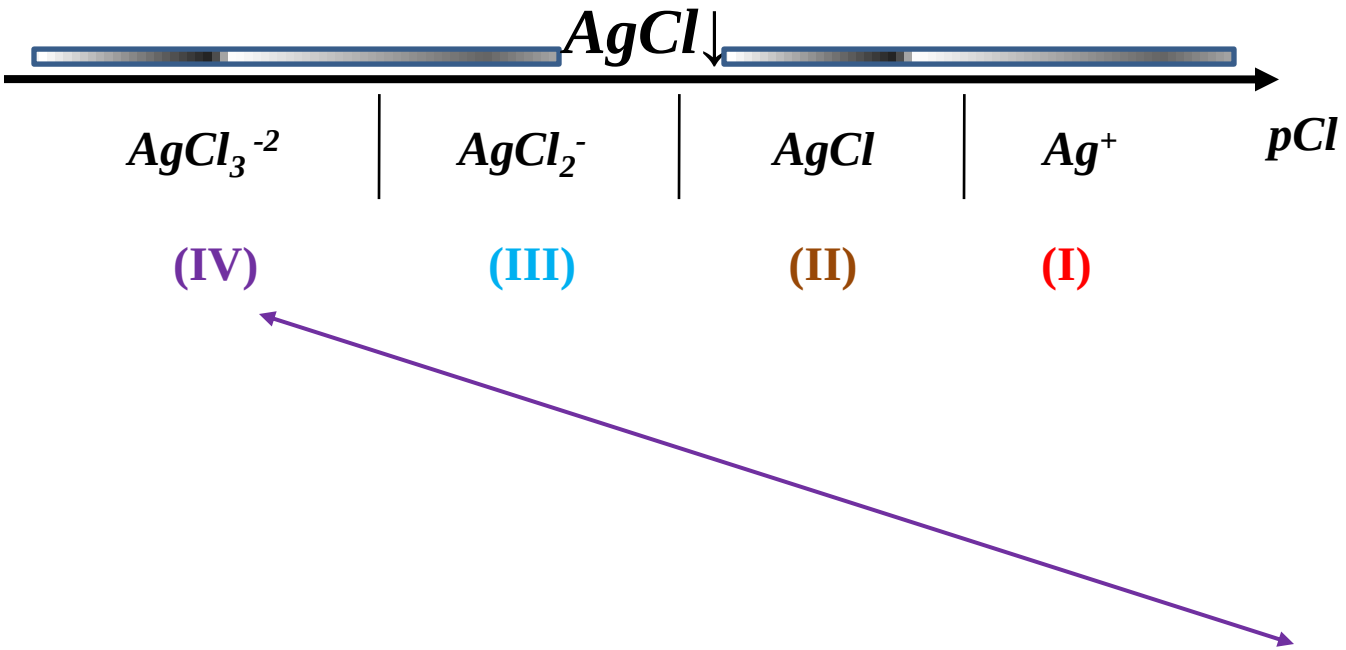
$$\log S' = -pKs + pCl + \log\left(1 + 10^{3.1-pCl} + 10^{5.1-2pCl} + 10^{6.1-3pCl}\right)$$

***Reducción del polinomio por sendas zonas de predominio*:**



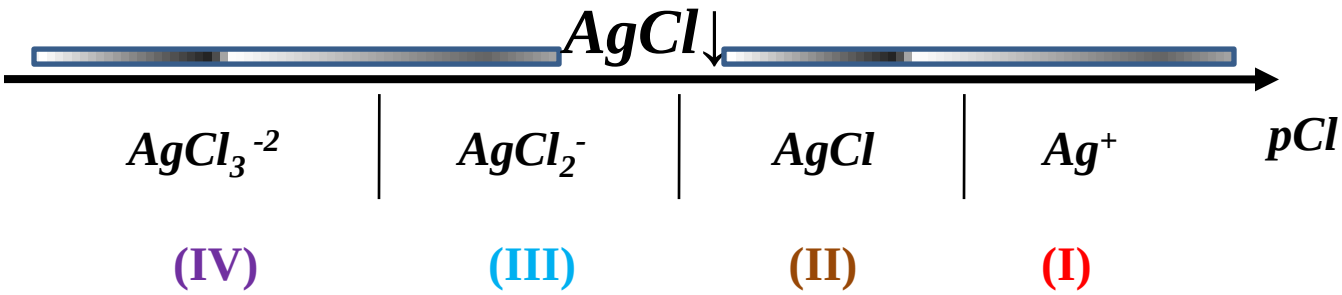
$$\log S' = -pKs + pCl + \log\left(1 + 10^{3.1-pCl} + 10^{5.1-2pCl} + 10^{6.1-3pCl}\right)$$

***Reducción del polinomio por sendas zonas de predominio*:**



$$\log S' = -pKs + pCl + \log\left(1 + 10^{3.1-pCl} + 10^{5.1-2pCl} + 10^{6.1-3pCl}\right)$$

***Reducción del polinomio por sendas zonas de predominio*:**



$$\log S' = -pKs + pCl + \log (1 + 10^{3.1-pCl} + 10^{5.1-2pCl} + 10^{6.1-3pCl})$$

$$\log S' = -pKs + pCl + \log (1 + \mathbf{10^{3.1-pCl}} + 10^{5.1-2pCl} + 10^{6.1-3pCl})$$

$$\log S' = -pKs + pCl + \log (1 + 10^{3.1-pCl} + \mathbf{10^{5.1-2pCl}} + 10^{6.1-3pCl})$$

$$\log S' = -pKs + pCl + \log (1 + 10^{3.1-pCl} + 10^{5.1-2pCl} + \mathbf{10^{6.1-3pCl}})$$

(I) $AgCl\downarrow = Ag^{+} + Cl^{-}$ $\log S' = -pKs + pCl = -9.6 + pCl$

$\log S' = -9.6 + pCl$

(II) $AgCl\downarrow = AgCl$ $\log S' = -pKs + pCl + \log (10^{3.1-pCl})$

$\log S' = -9.6 + 3.1 + pCl - pCl = -6$

$\log S' = \log S_0 = -6$

(III) $AgCl\downarrow + Cl^{-} = AgCl_2^{-}$ $\log S' = -pKs + pCl + \log (10^{5.1-2pCl})$

$\log S' = -9.6 + 5.1 + pCl - 2pCl = -4.5 - pCl$

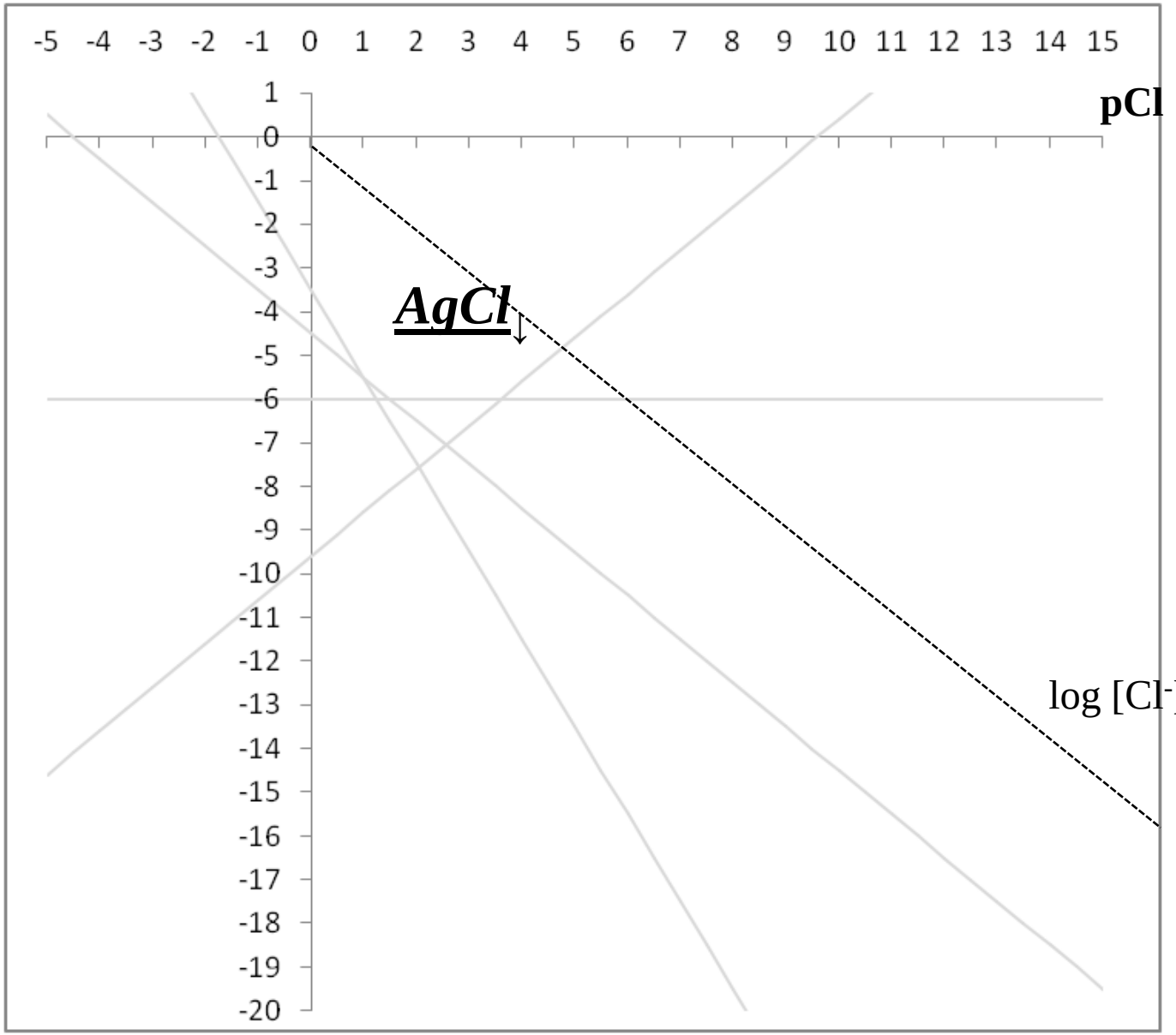
$\log S' = -4.5 - pCl$

(IV) $AgCl\downarrow + 2Cl^{-} = AgCl_3^{-2}$ $\log S' = -pKs + pCl + \log (10^{6.1-3pCl})$

$\log S' = -9.6 + 6.1 + pCl - 3pCl = -3.5 - 2pCl$

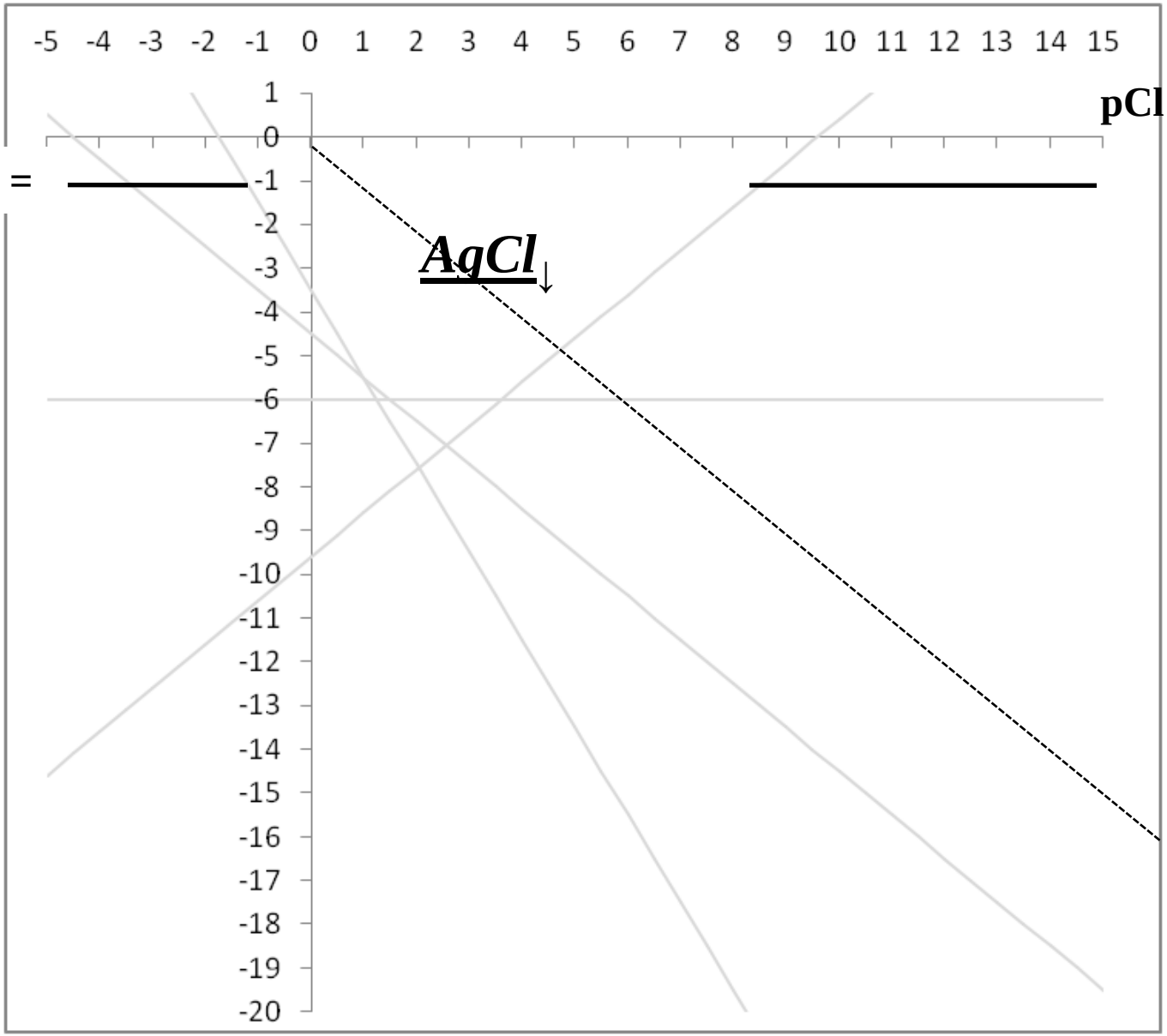
$\log S' = -3.5 - 2pCl$

log [Ag^+]´ = log S´= f(pH):



log $[Ag^+]'$ = log S´= f(pH):

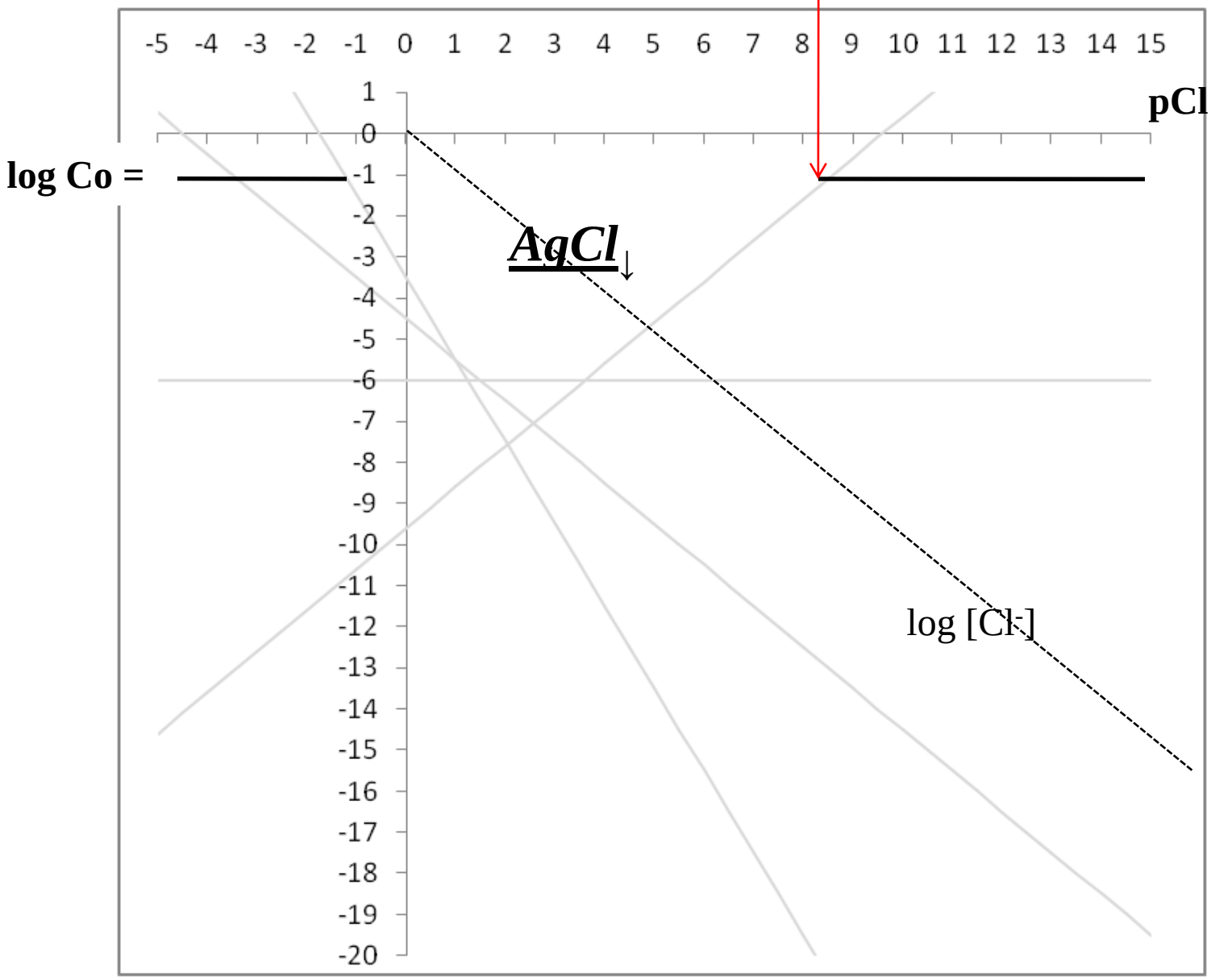
(1)

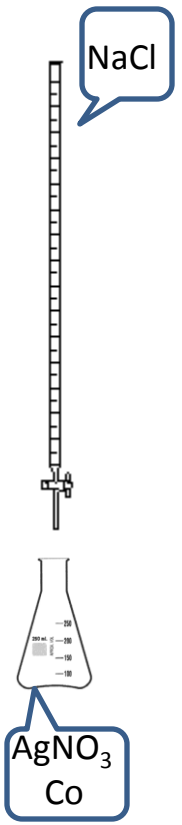


log [Ag^+]´ = log S´= f(pH):

pCl de inicio de precipitación

(1)

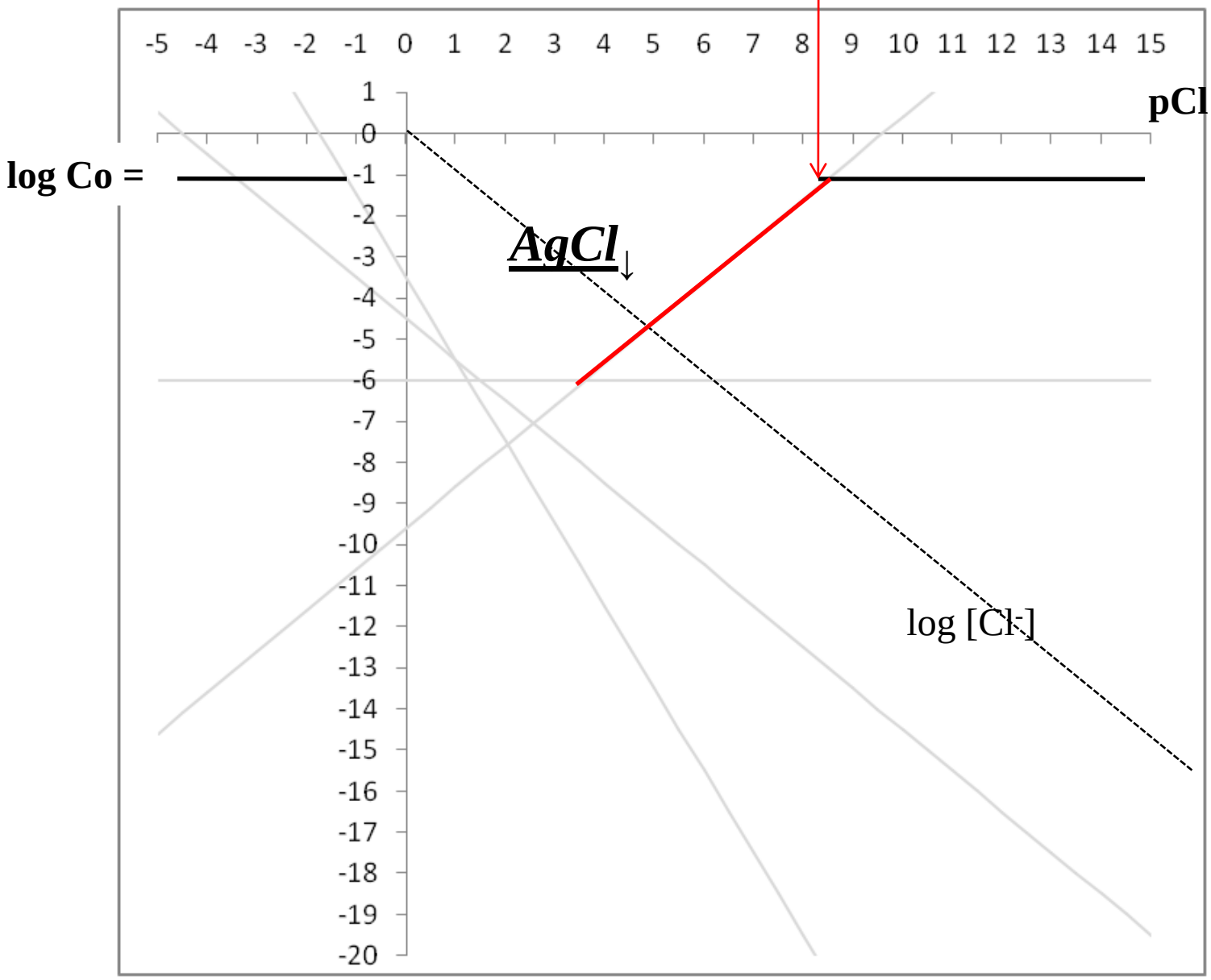




$AgNO_3$
Co

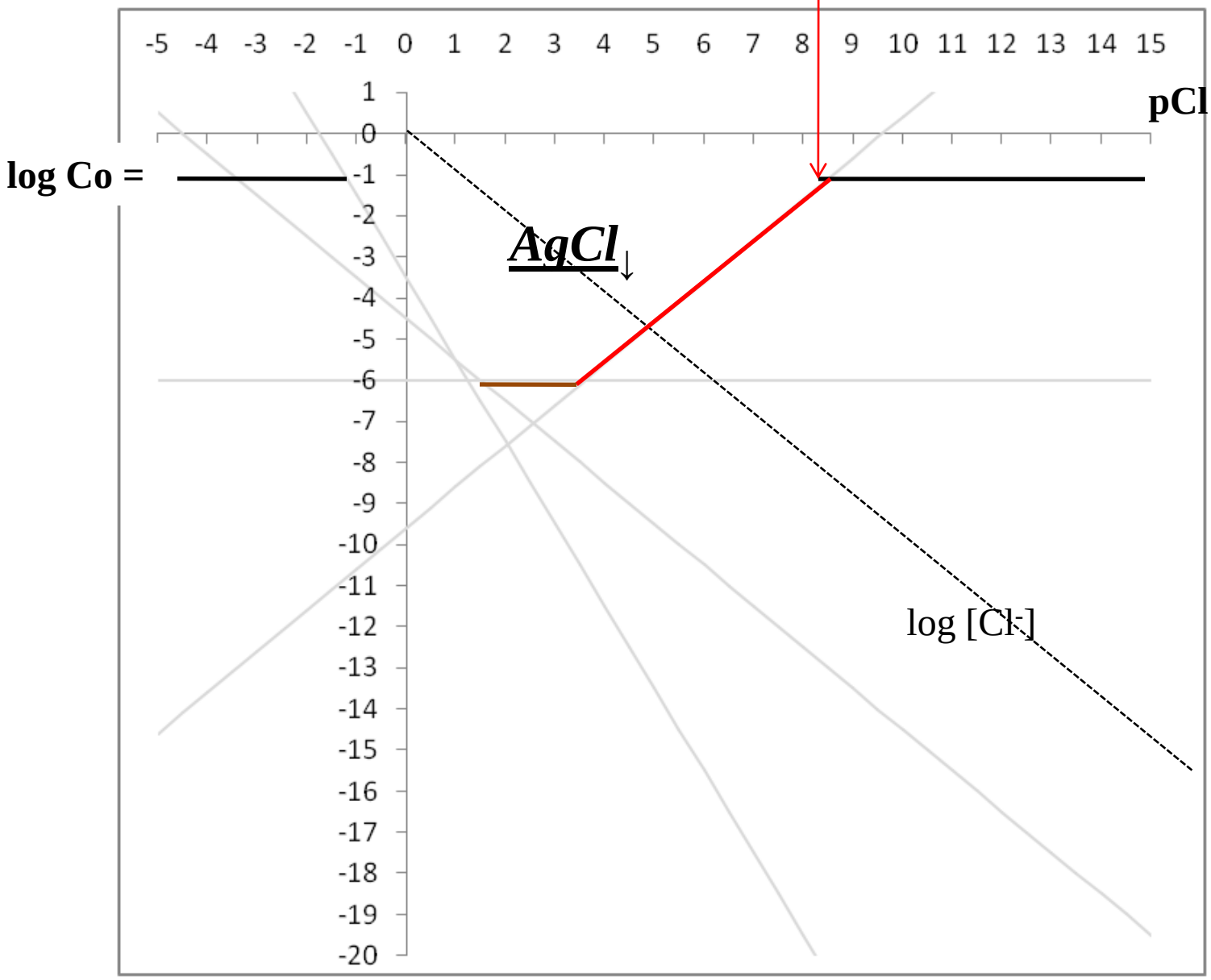
log [Ag^+]´ = log S´= f(pH):

(1)



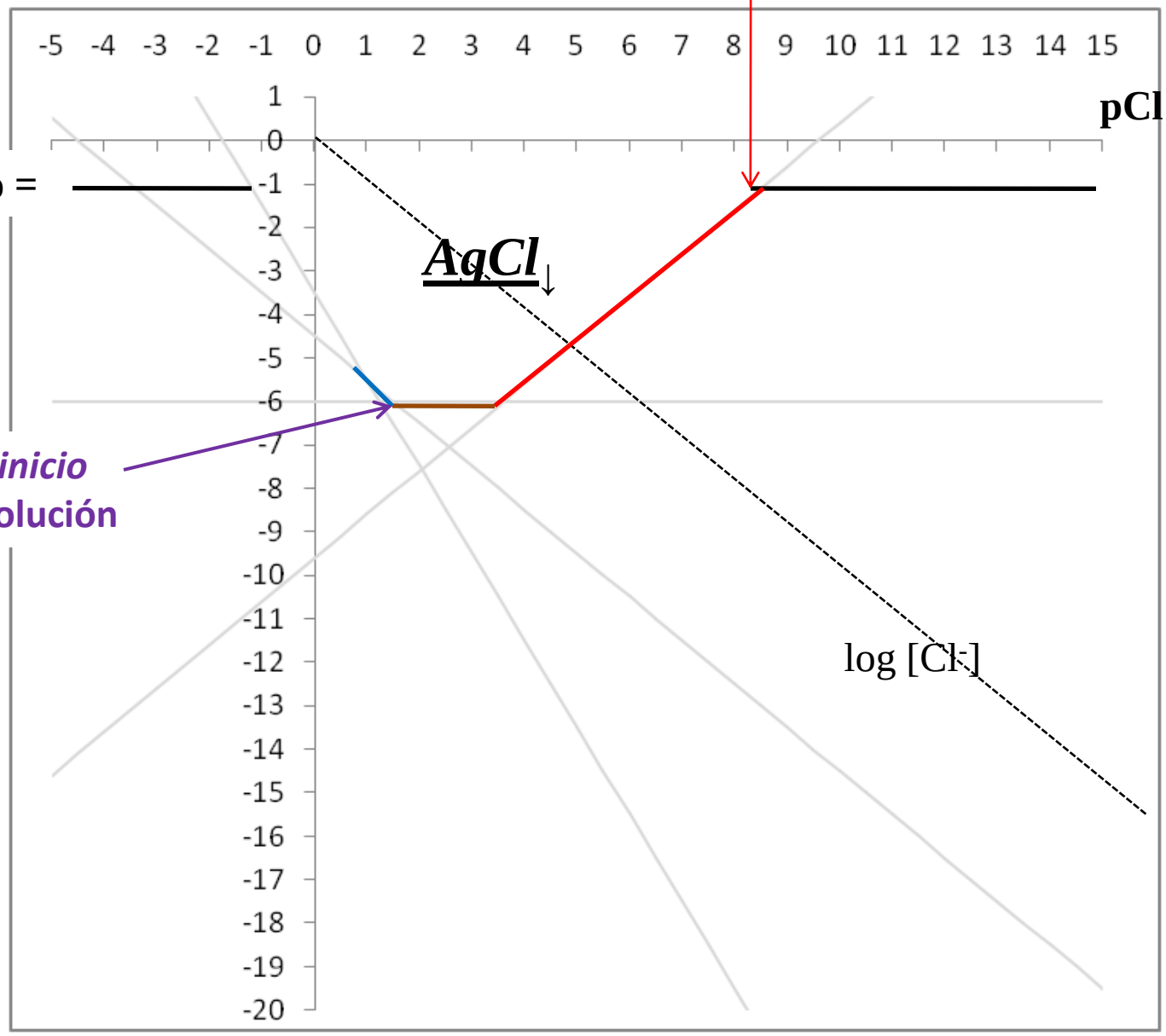
log [Ag^+]´ = log S´= f(pH):

(1)

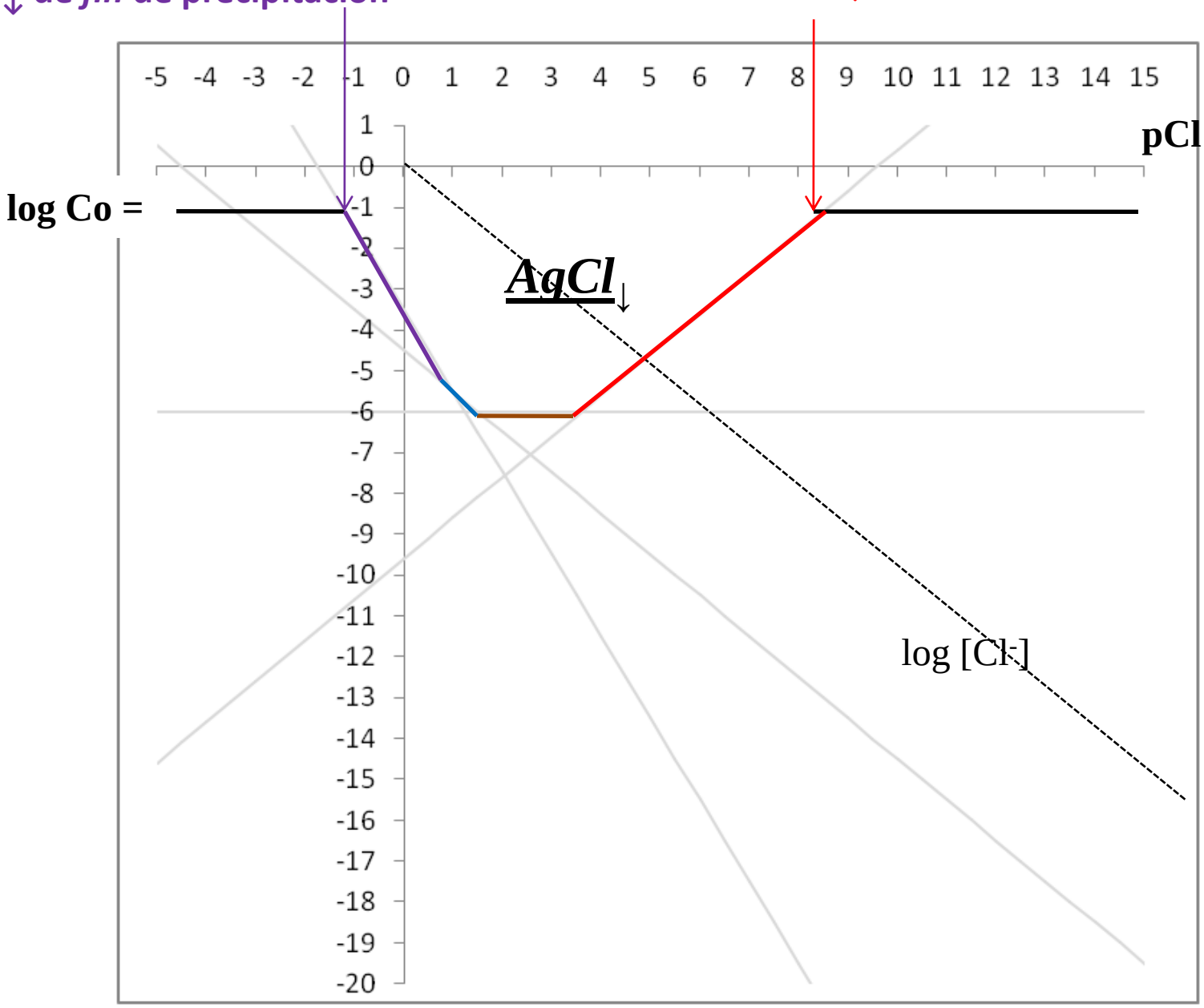


log [Ag^+]´ = log S´= f(pH):

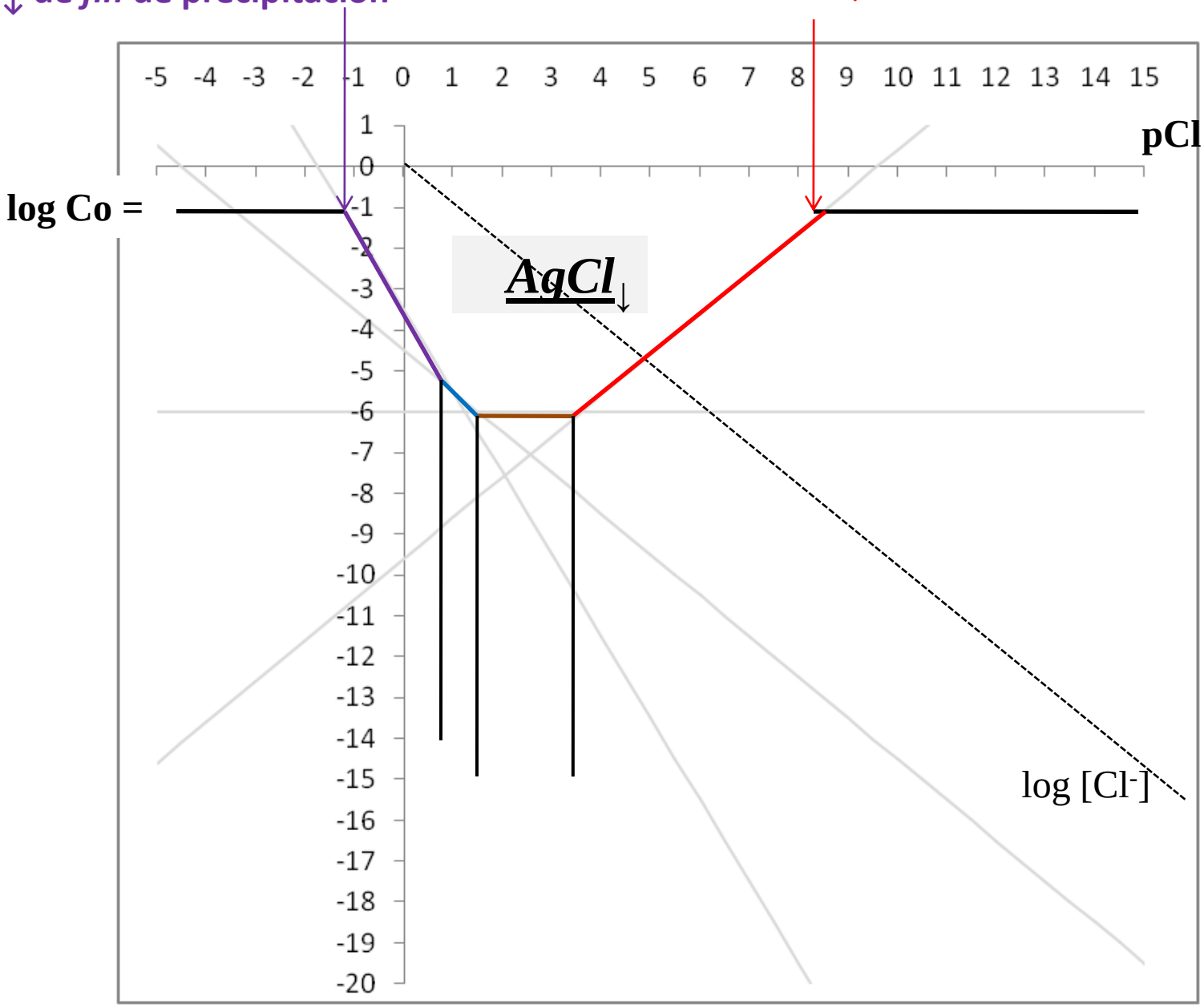
(1)



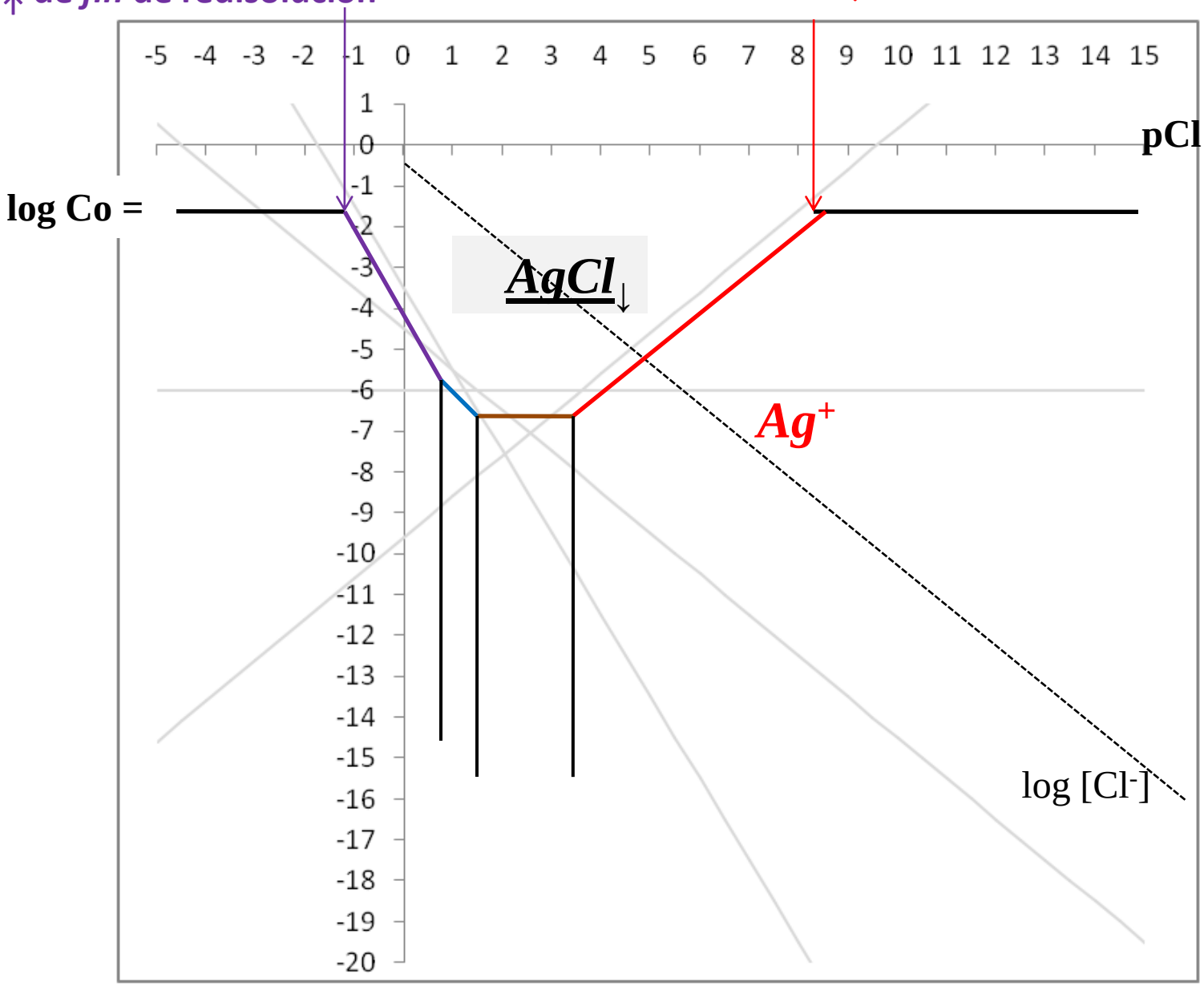
(1)


pCl↓ de *fin* de precipitación
pCl↓ de inicio de precipitación
-5 -4 -3 -2 -1 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
pCl
1 0 -1 -2 -3 -4 -5 -6 -7 -8 -9 -10 -11 -12 -13 -14 -15 -16 -17 -18 -19 -20
log Co =
AgCl↓
log [Cl-]

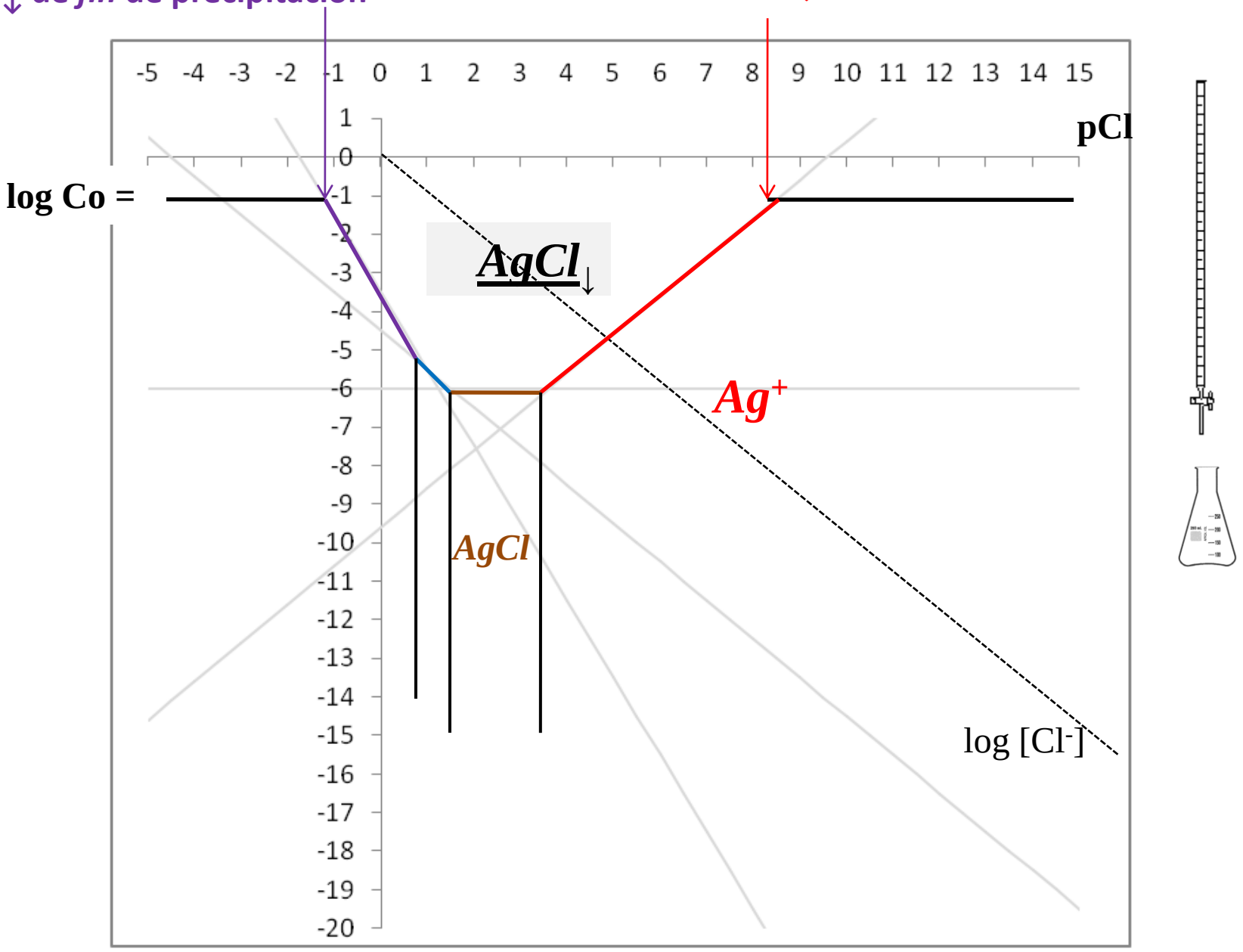
(1)


pCl↓ de *fin* de precipitación
pCl↓ de inicio de precipitación
-5 -4 -3 -2 -1 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
pCl
1 0 -1 -2 -3 -4 -5 -6 -7 -8 -9 -10 -11 -12 -13 -14 -15 -16 -17 -18 -19 -20
log Co =
AgCl↓
log [Cl-]

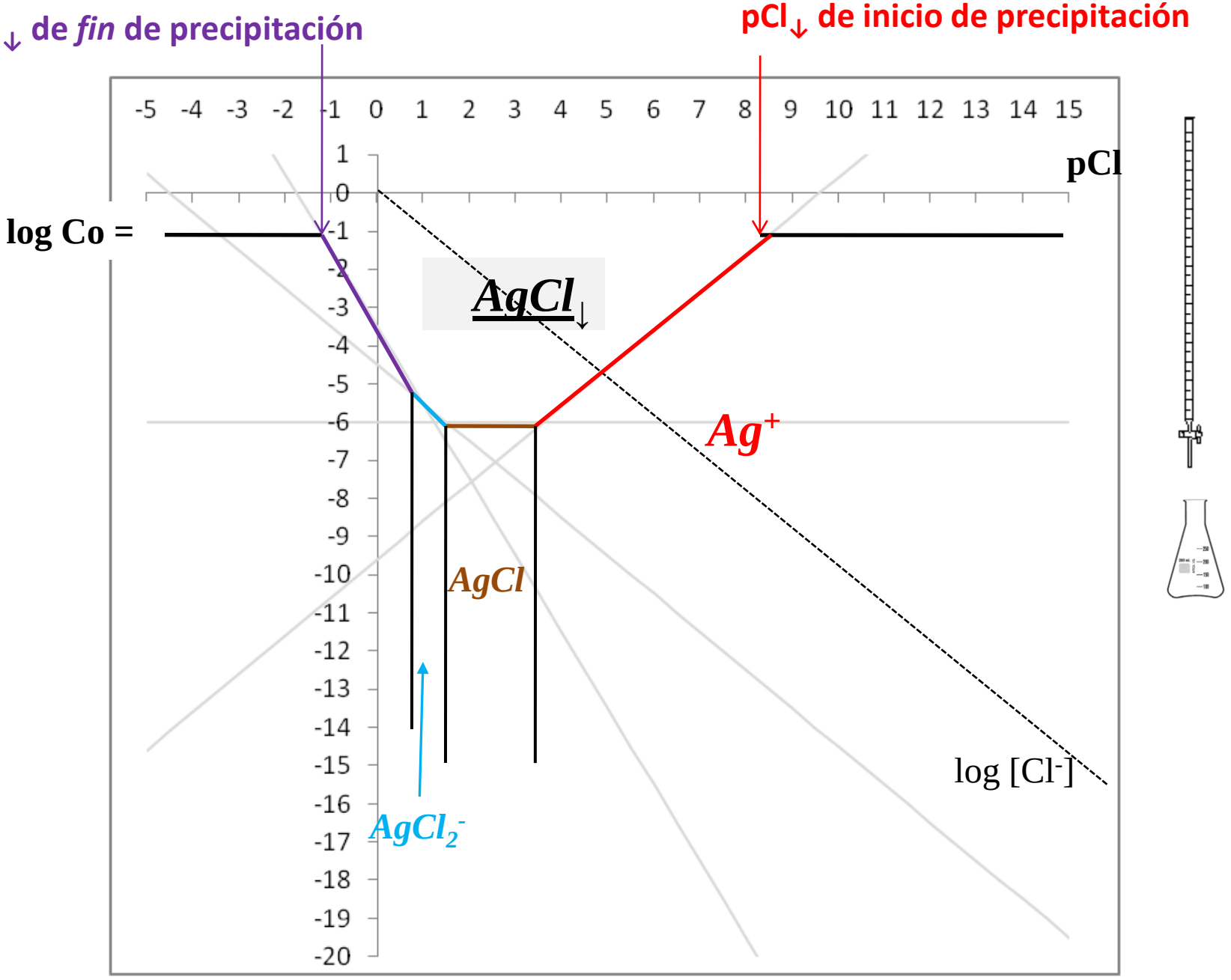
(1)


pCl↑ de *fin* de redisolución
pCl↓ de inicio de precipitación
-5 -4 -3 -2 -1 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
1 0 -1 -2 -3 -4 -5 -6 -7 -8 -9 -10 -11 -12 -13 -14 -15 -16 -17 -18 -19 -20
pCl
log Co =
AgCl↓
Ag+
log [Cl-]

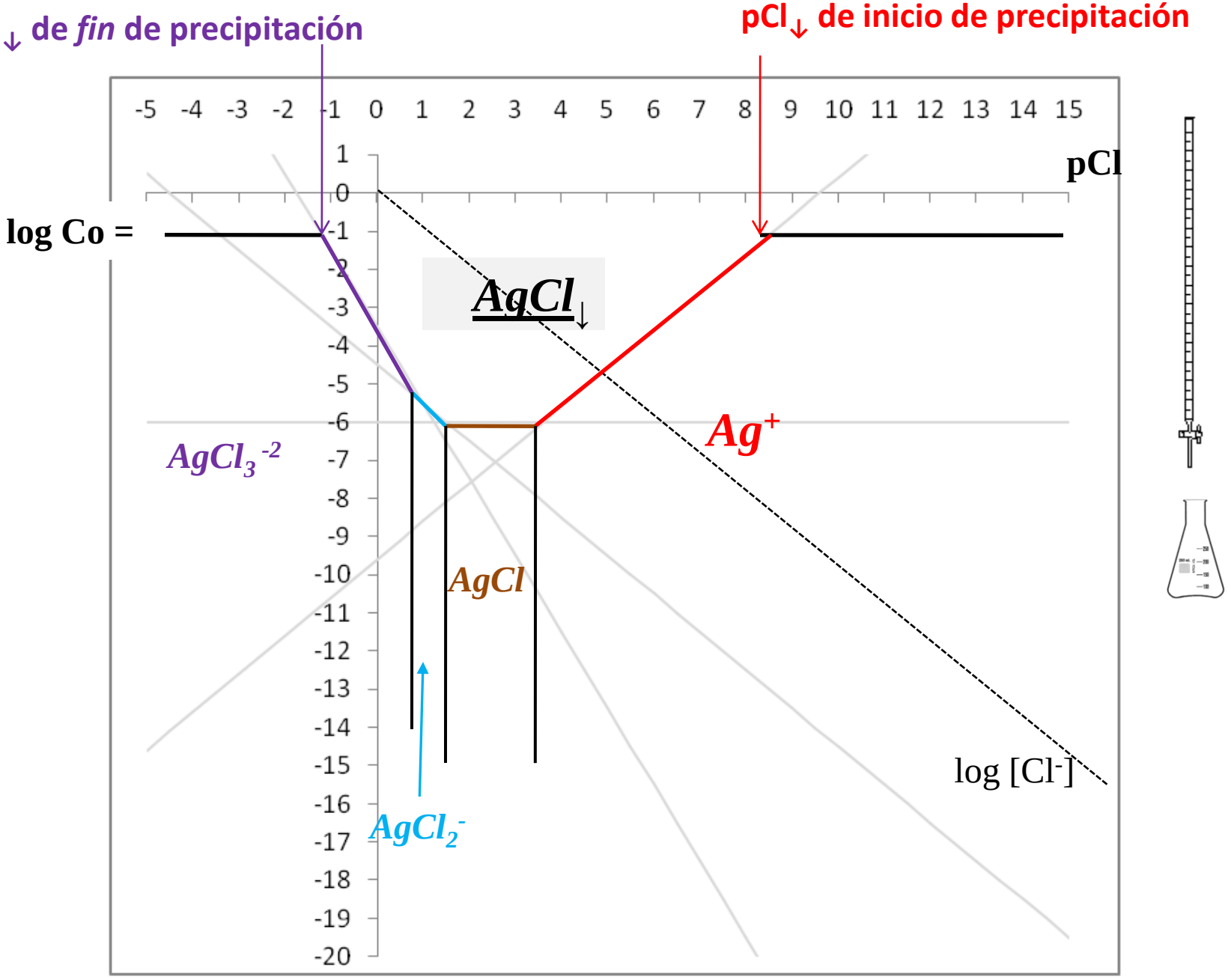
(1)

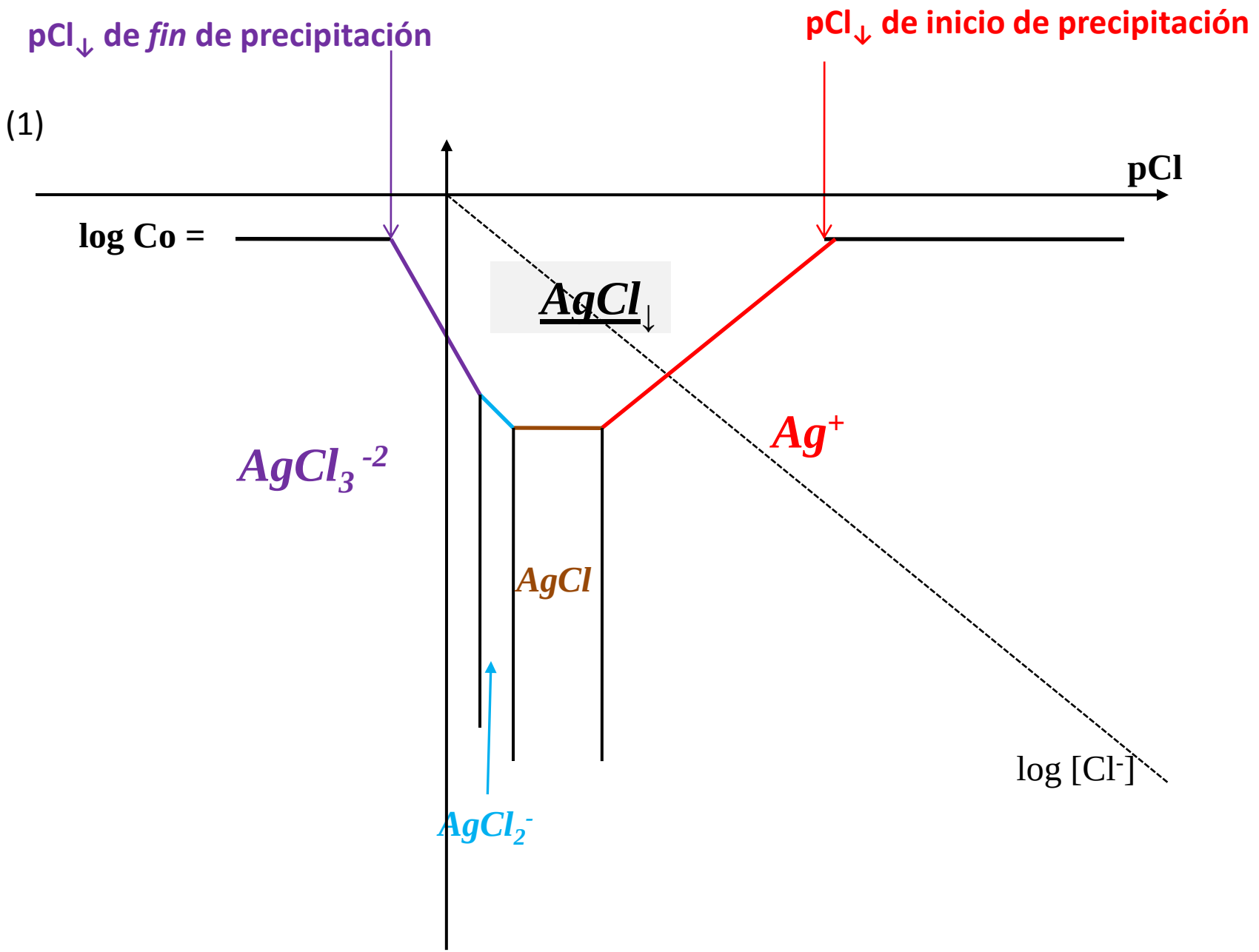

pCl↓ de *fin* de precipitación
pCl↓ de inicio de precipitación
-5 -4 -3 -2 -1 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
pCl
1 0 -1 -2 -3 -4 -5 -6 -7 -8 -9 -10 -11 -12 -13 -14 -15 -16 -17 -18 -19 -20
log Co =
AgCl↓
Ag+
AgCl
log [Cl-]

(1)


pCl↓ de *fin* de precipitación
pCl↓ de inicio de precipitación
-5 -4 -3 -2 -1 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
pCl
1 0 -1 -2 -3 -4 -5 -6 -7 -8 -9 -10 -11 -12 -13 -14 -15 -16 -17 -18 -19 -20
log Co =
AgCl↓
Ag+
AgCl
AgCl2-
log [Cl-]

(1)


pCl↓ de *fin* de precipitación
pCl↓ de inicio de precipitación
-5 -4 -3 -2 -1 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
pCl
1 0 -1 -2 -3 -4 -5 -6 -7 -8 -9 -10 -11 -12 -13 -14 -15 -16 -17 -18 -19 -20
log Co =
AgCl↓
Ag+
AgCl3-2
AgCl
AgCl2-
log [Cl-]


pCl↓ de *fin* de precipitación
pCl↓ de inicio de precipitación
(1)
pCl
log Co =
AgCl↓
Ag+
AgCl3 -2
AgCl
AgCl2-
log [Cl-]

$\log S' = -pKs + pCl + \log (1 + 10^{3.1-pCl} + 10^{5.1-2pCl} + 10^{6.1-3pCl})$:

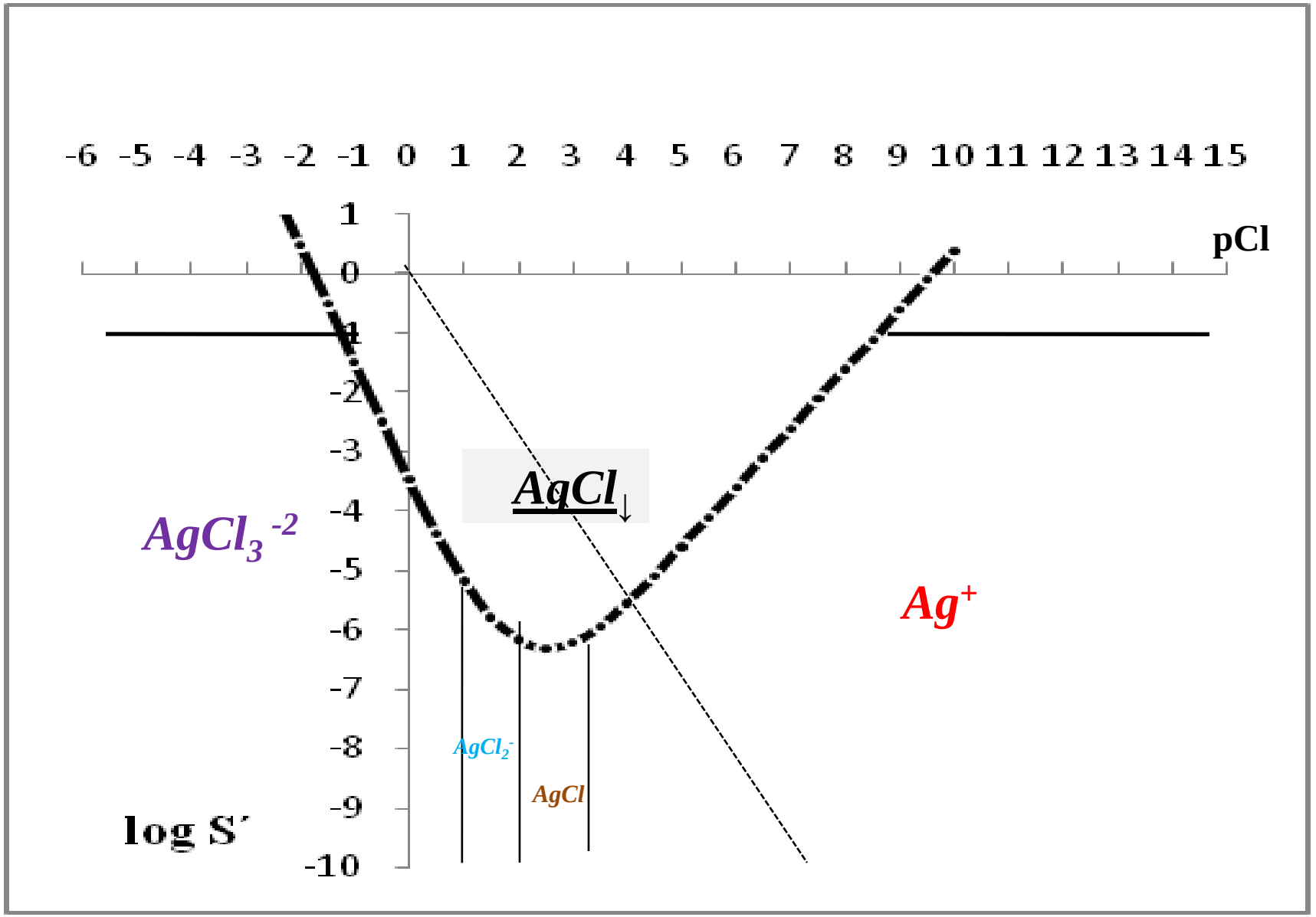


Diagrama homogéneo:

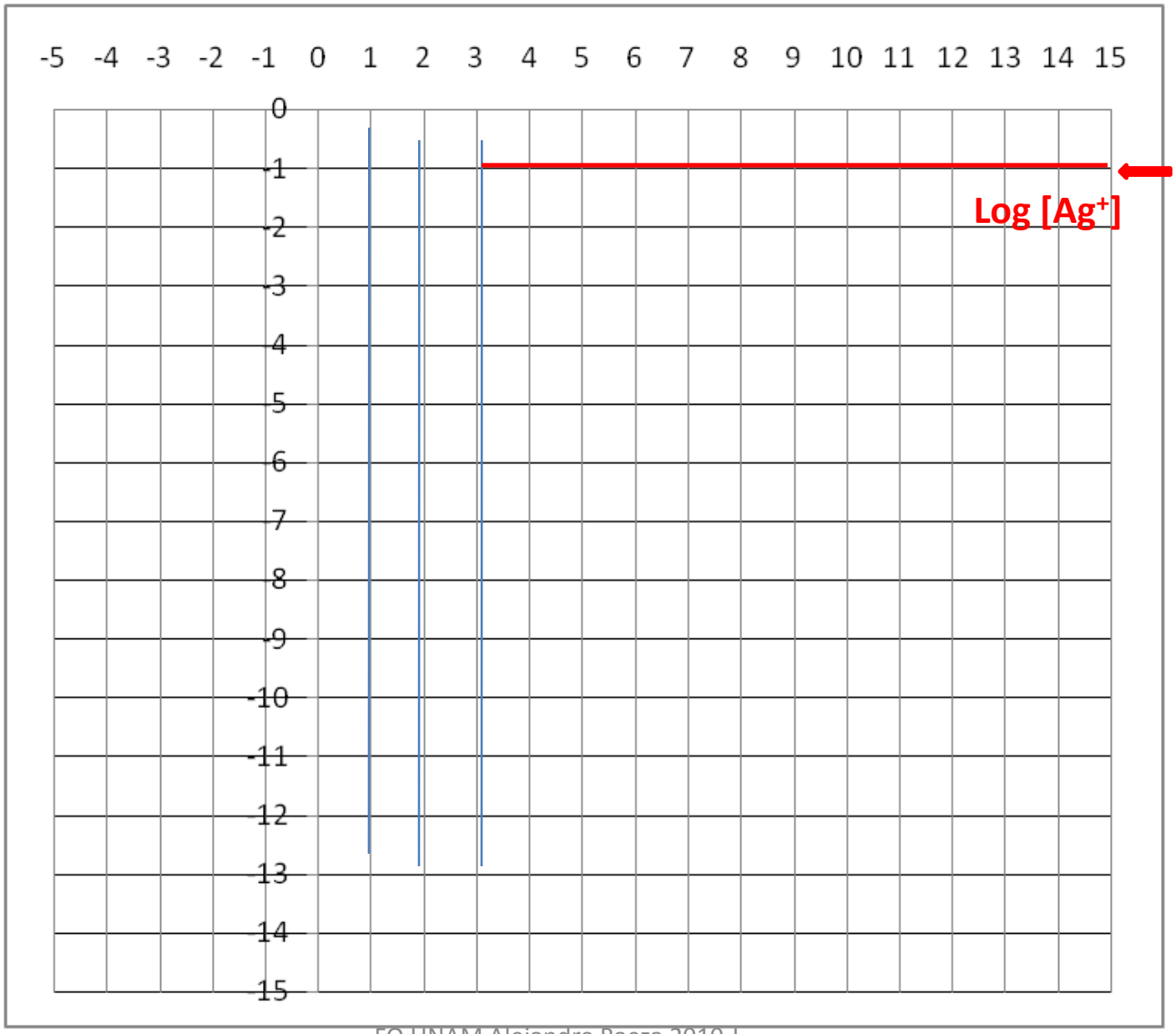


Diagrama homogéneo:

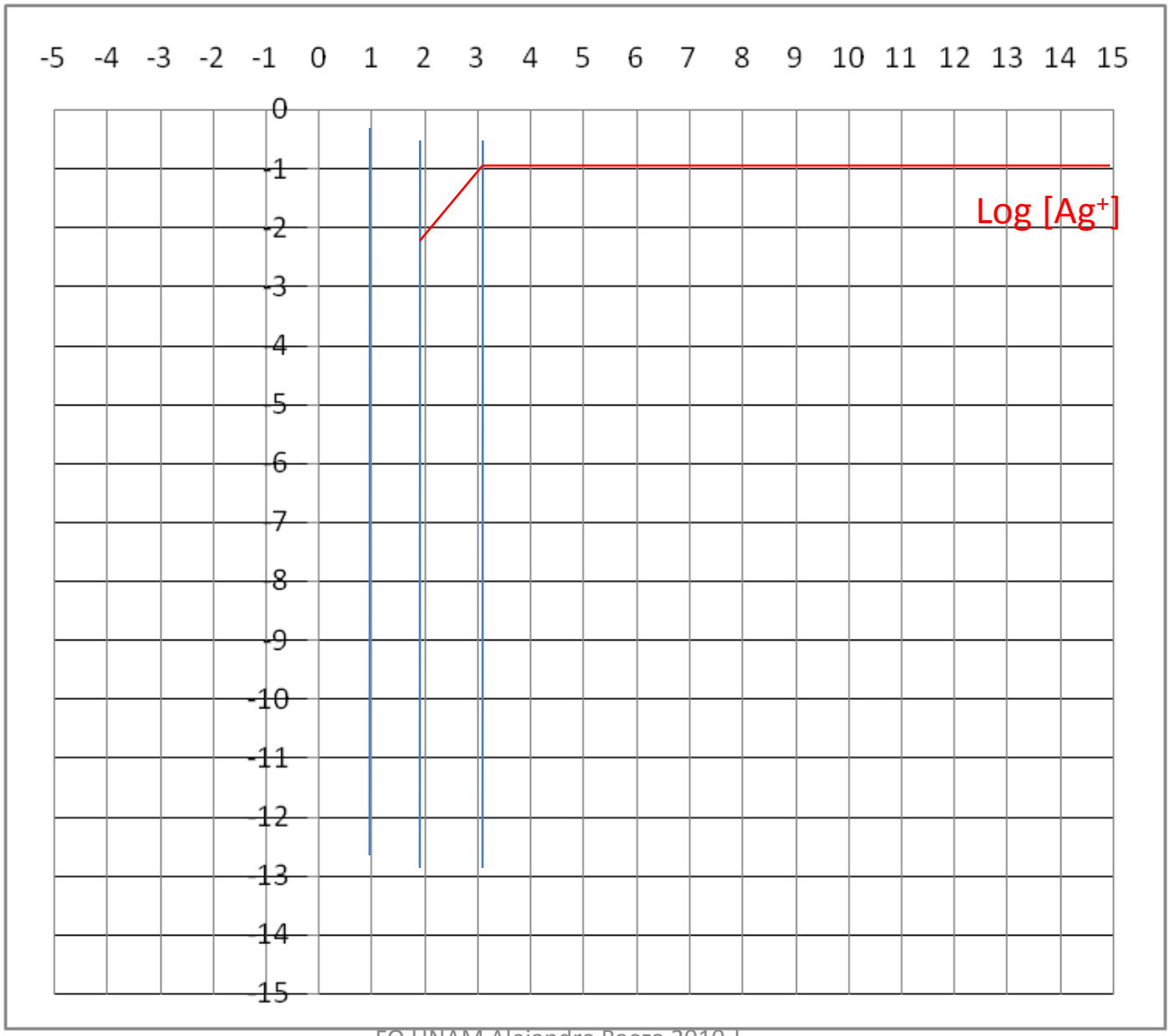
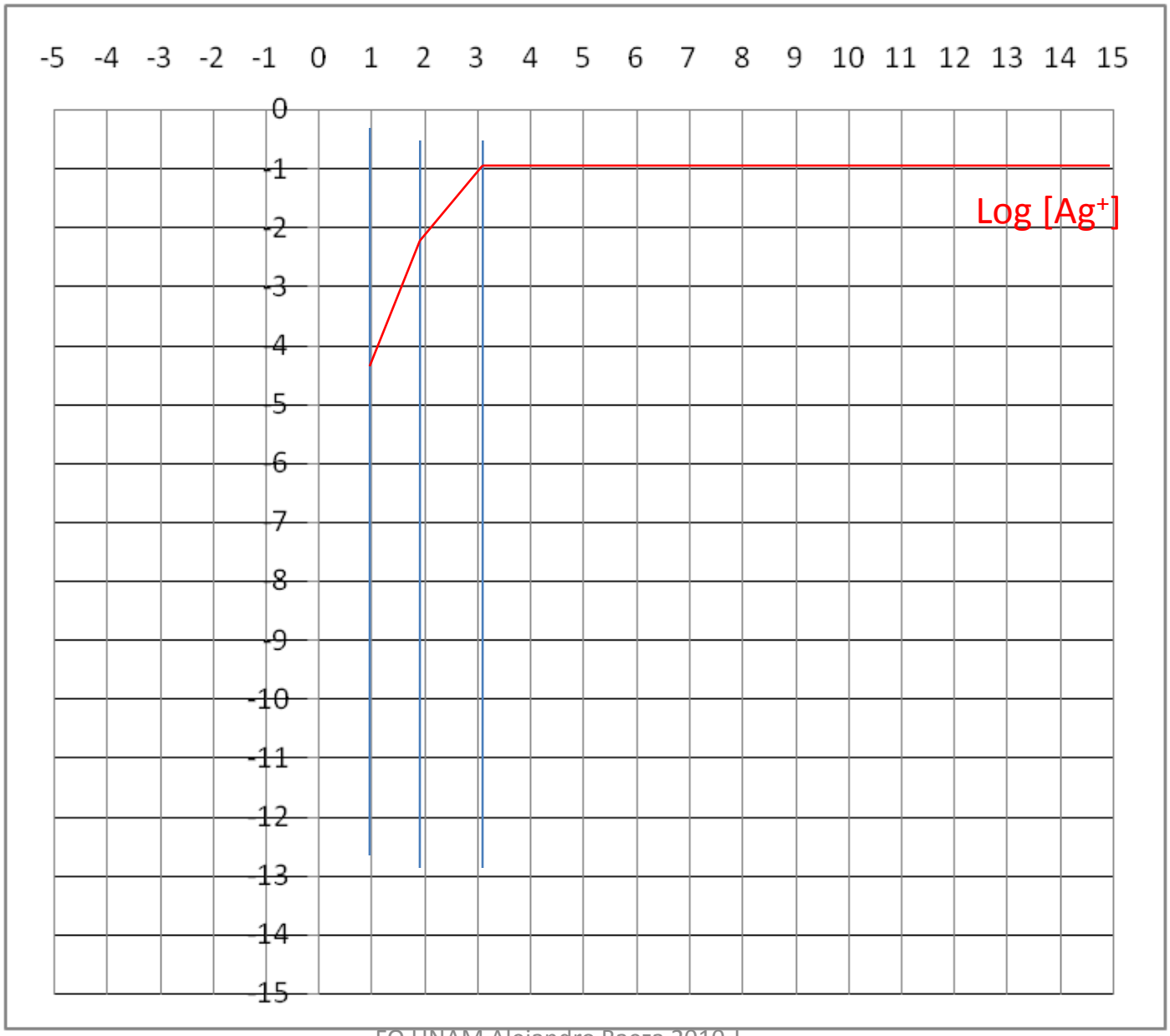


Diagrama homogéneo:



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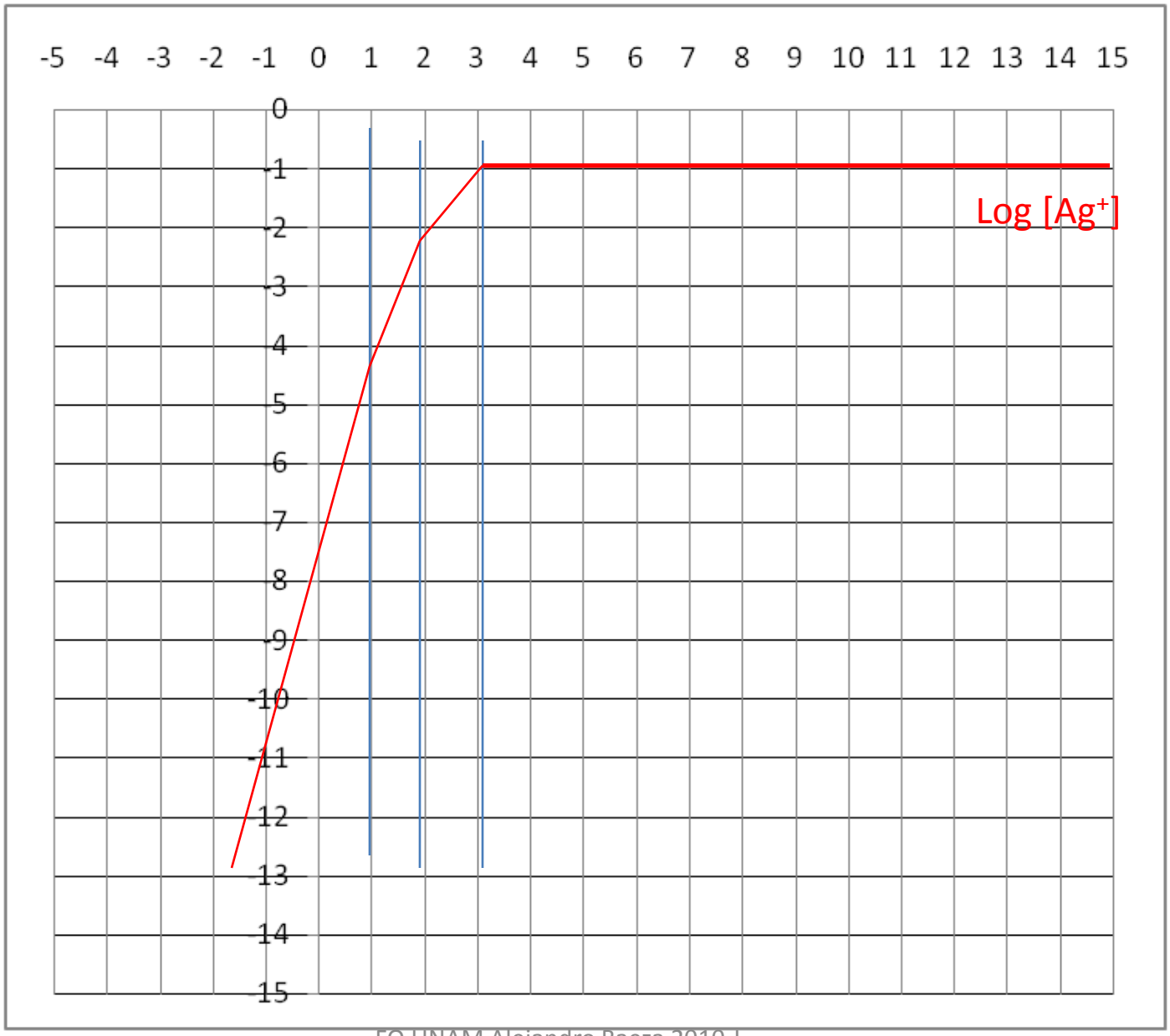

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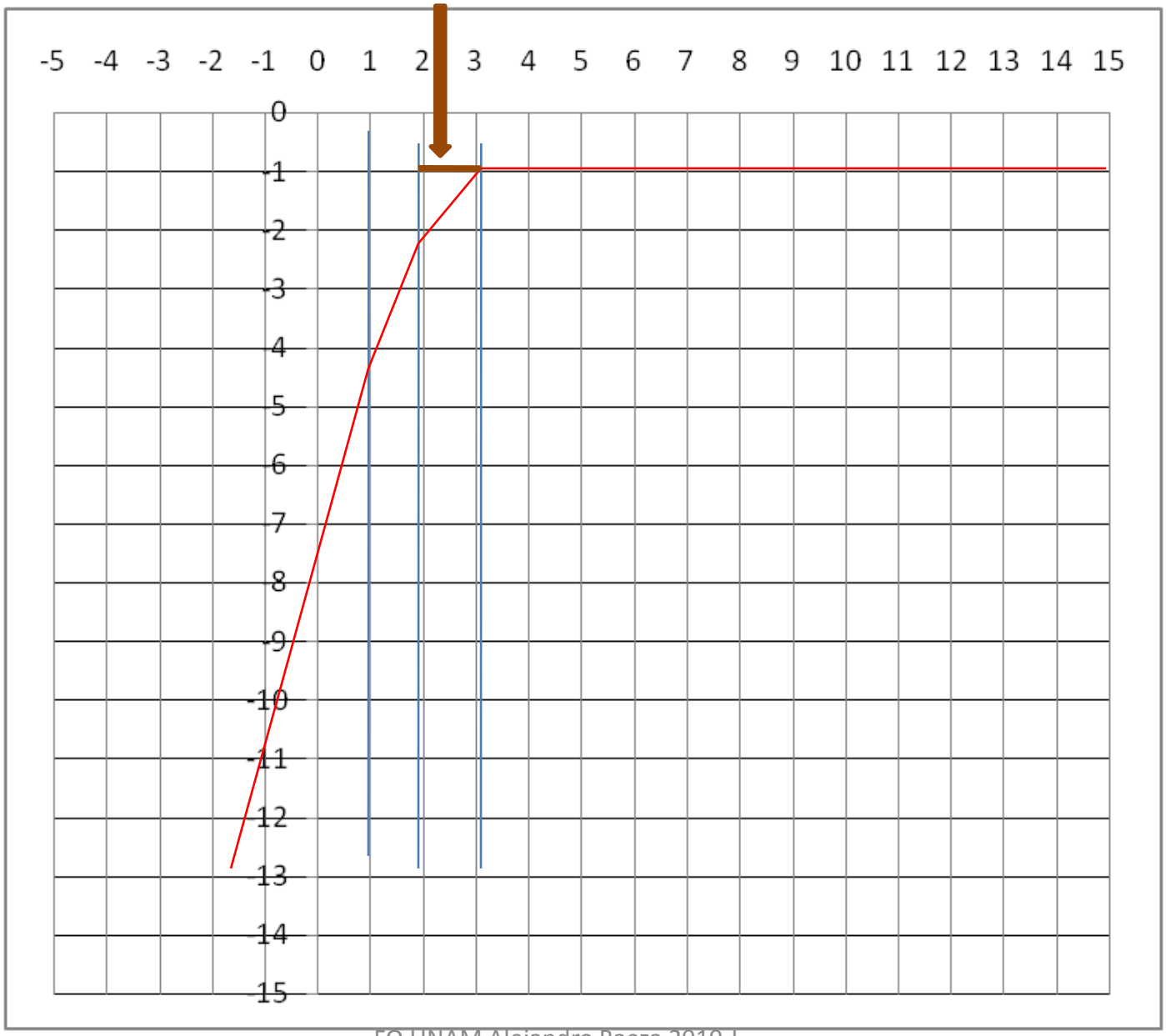

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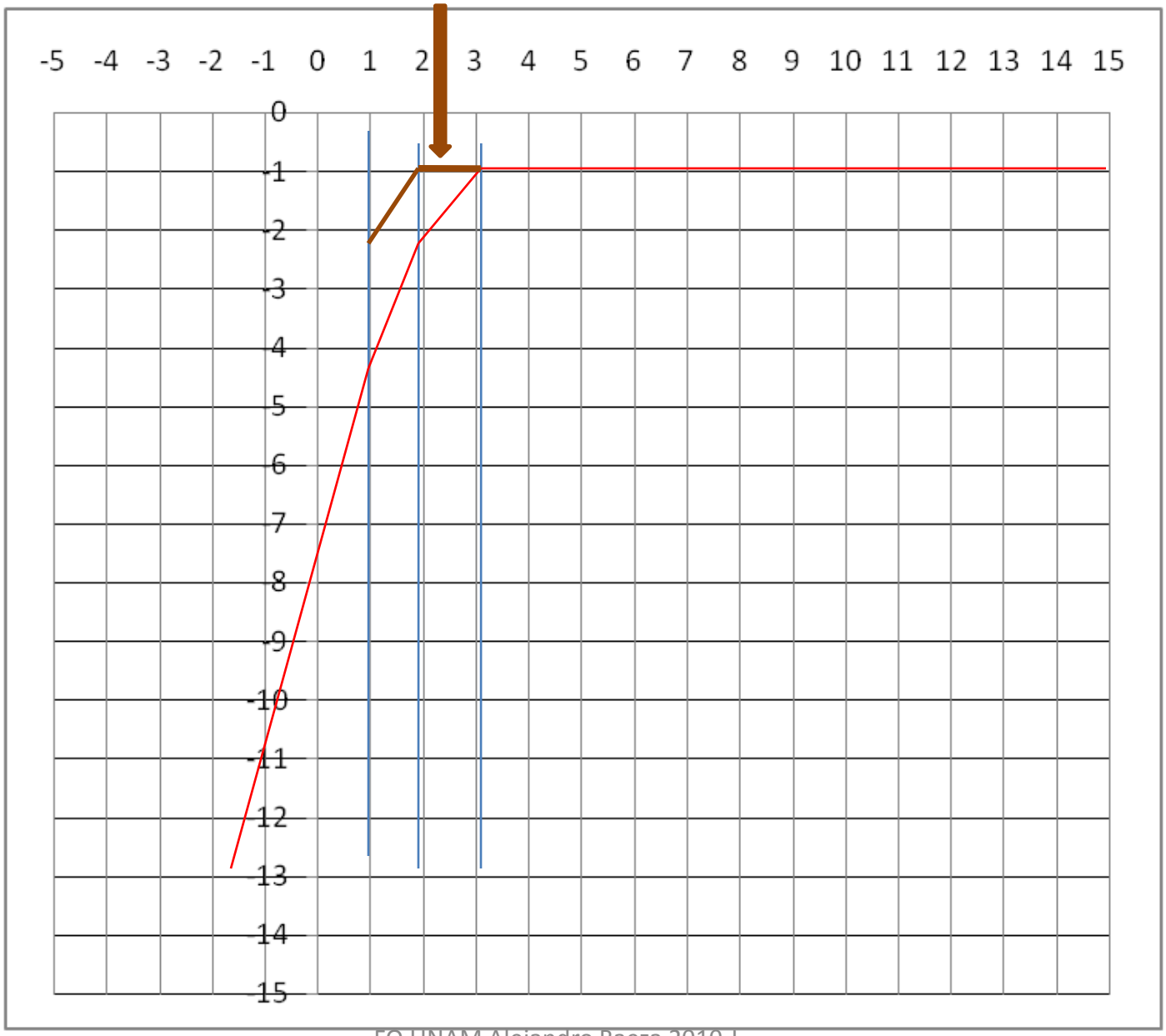
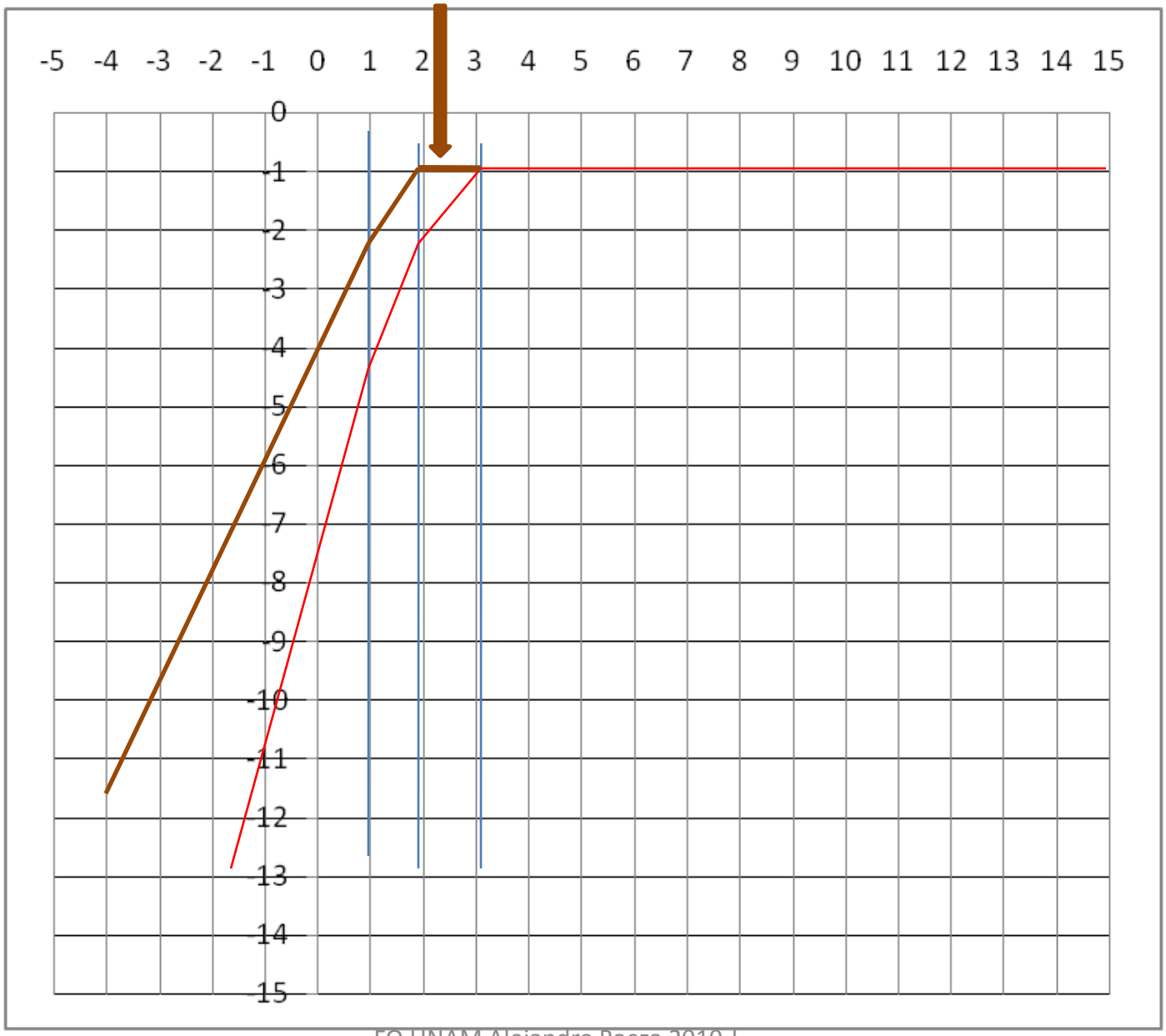


Diagrama homogéneo:



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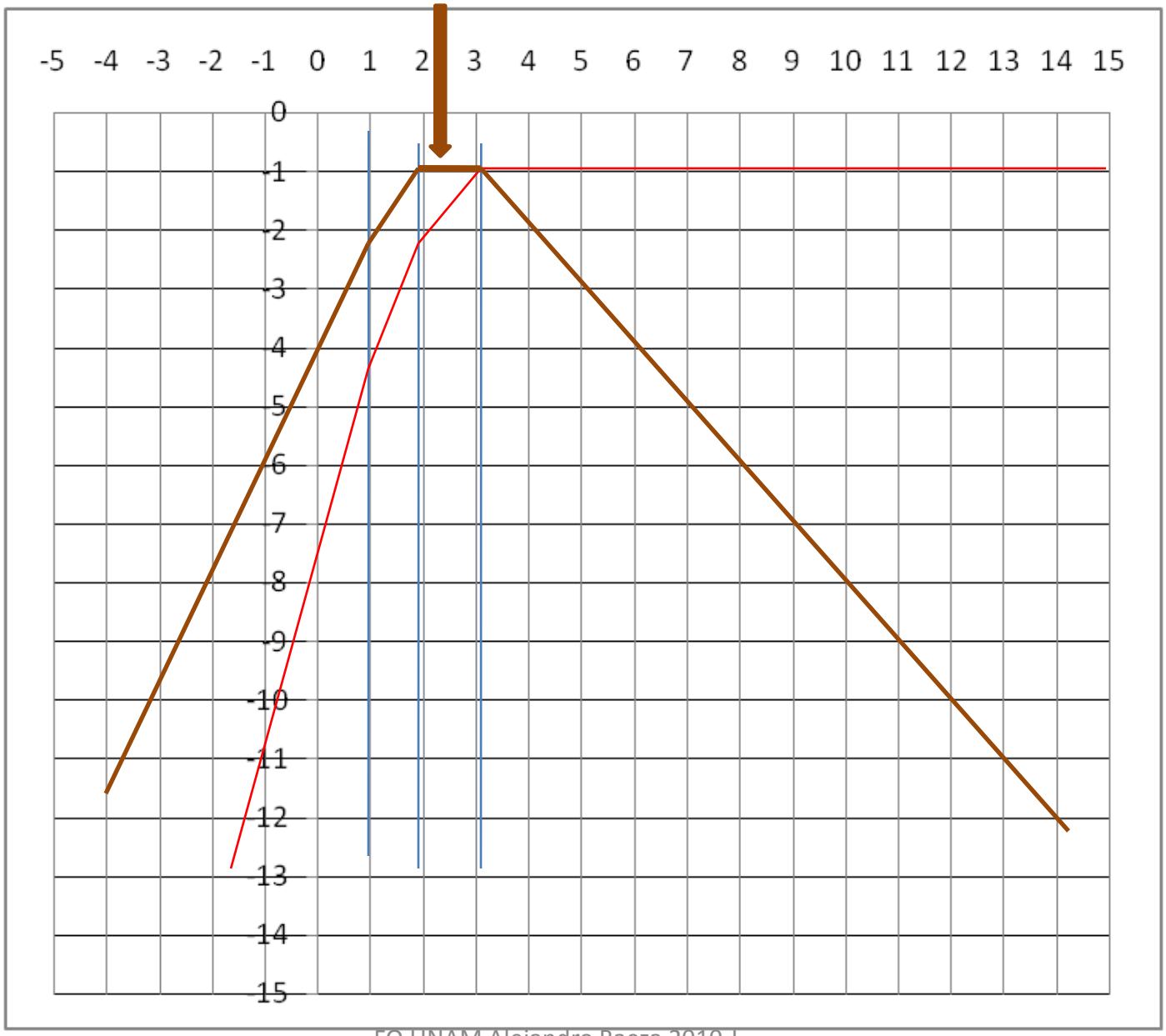
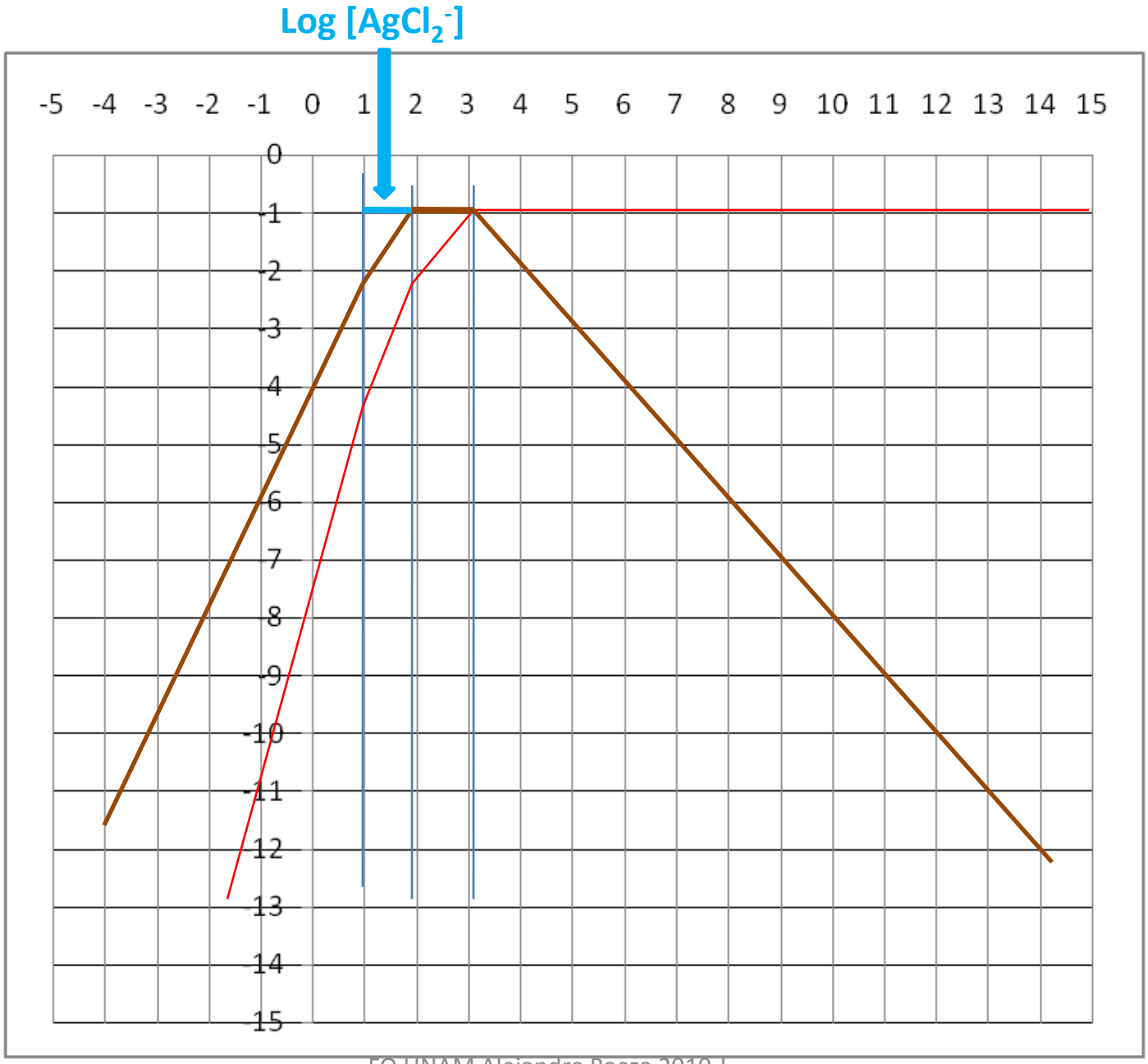
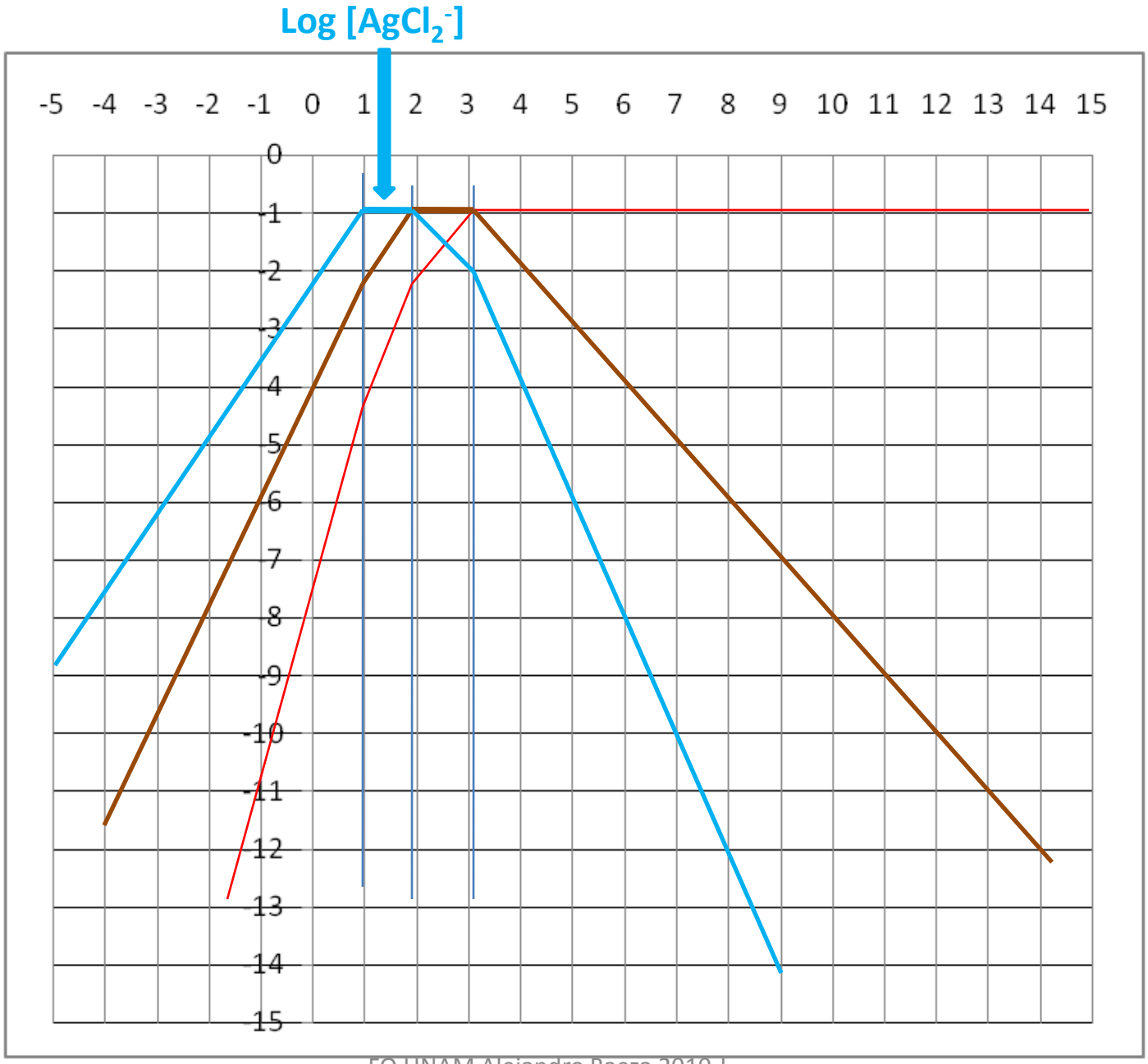
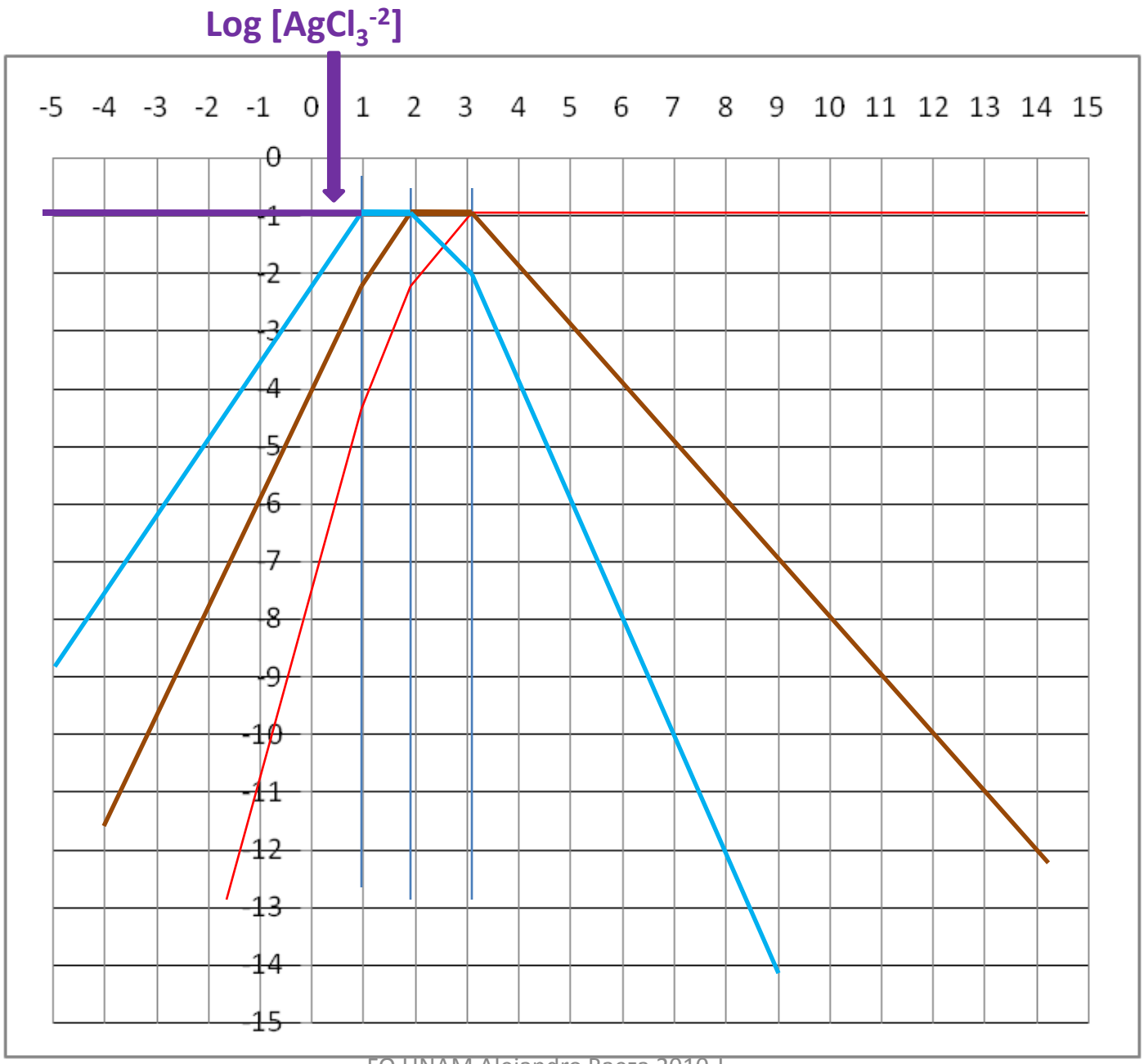


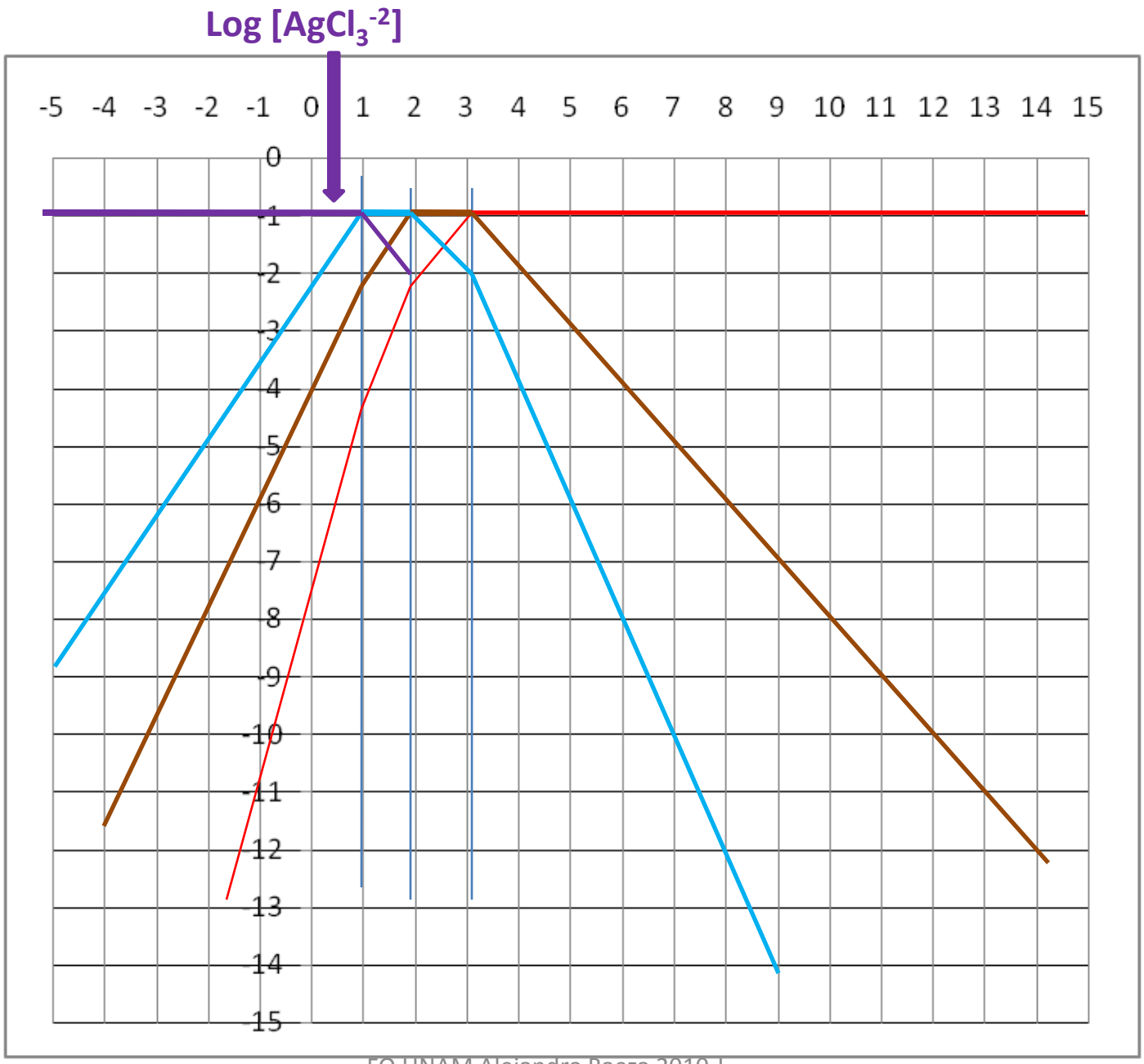

Log [AgCl2-]
-5 -4 -3 -2 -1 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
0
-1
-2
-3
-4
-5
-6
-7
-8
-9
-10
-11
-12
-13
-14
-15

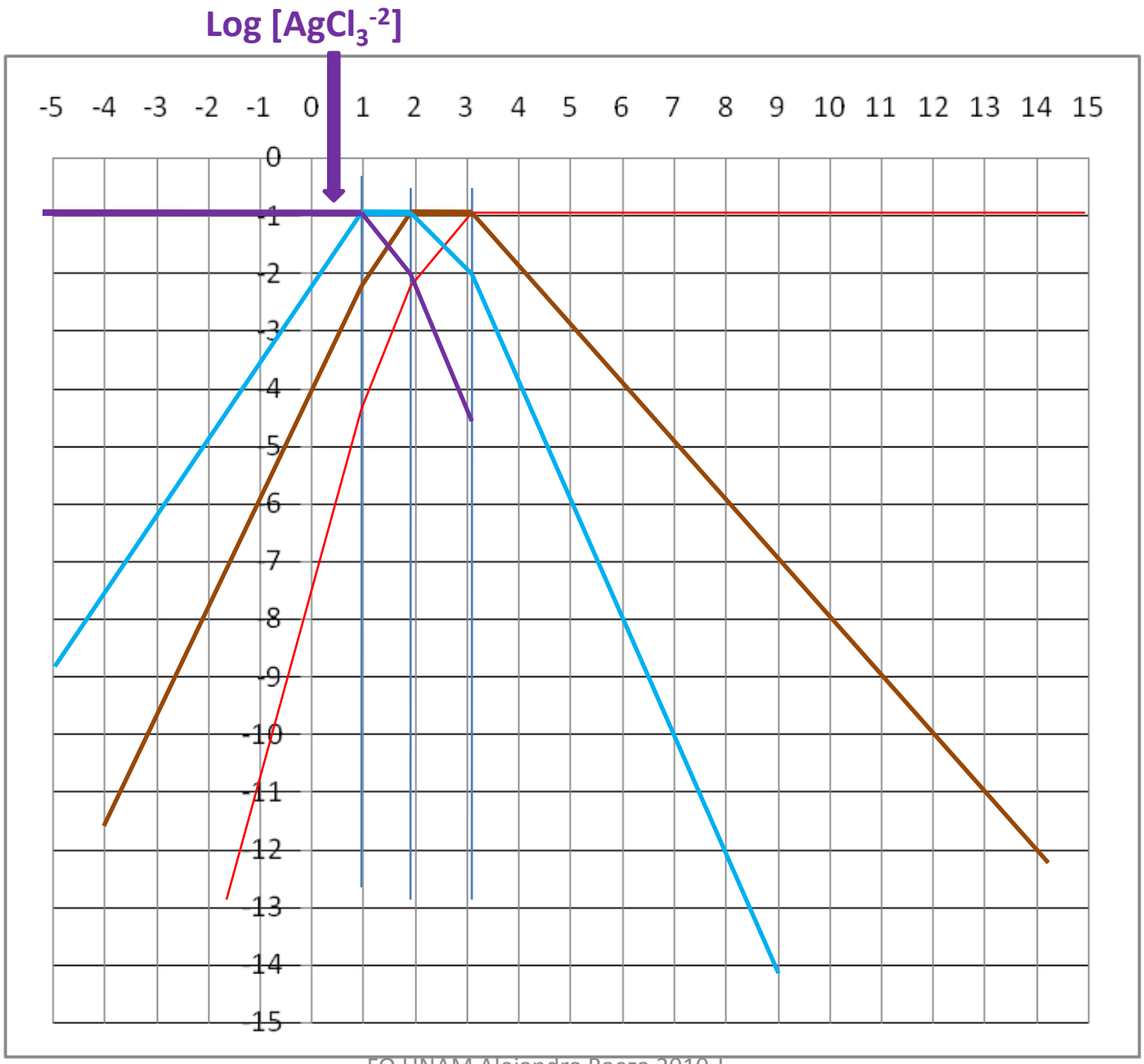

Log [AgCl2-]
-5 -4 -3 -2 -1 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
0 -1 -2 -3 -4 -5 -6 -7 -8 -9 -10 -11 -12 -13 -14 -15

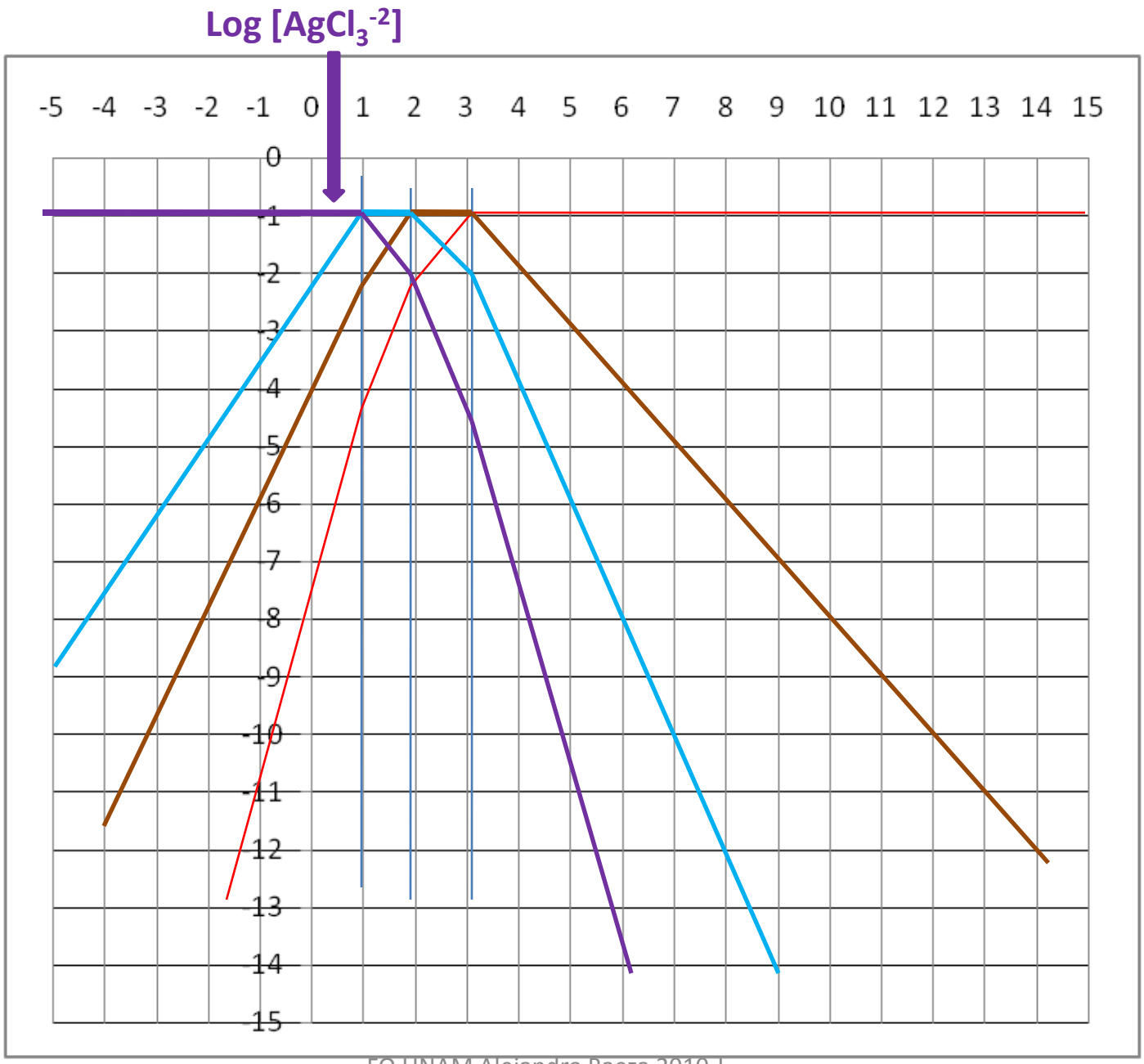

Log [AgCl2-]
-5 -4 -3 -2 -1 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
0 -1 -2 -3 -4 -5 -6 -7 -8 -9 -10 -11 -12 -13 -14 -15


Log [AgCl2-]
-5 -4 -3 -2 -1 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
0 -1 -2 -3 -4 -5 -6 -7 -8 -9 -10 -11 -12 -13 -14 -15

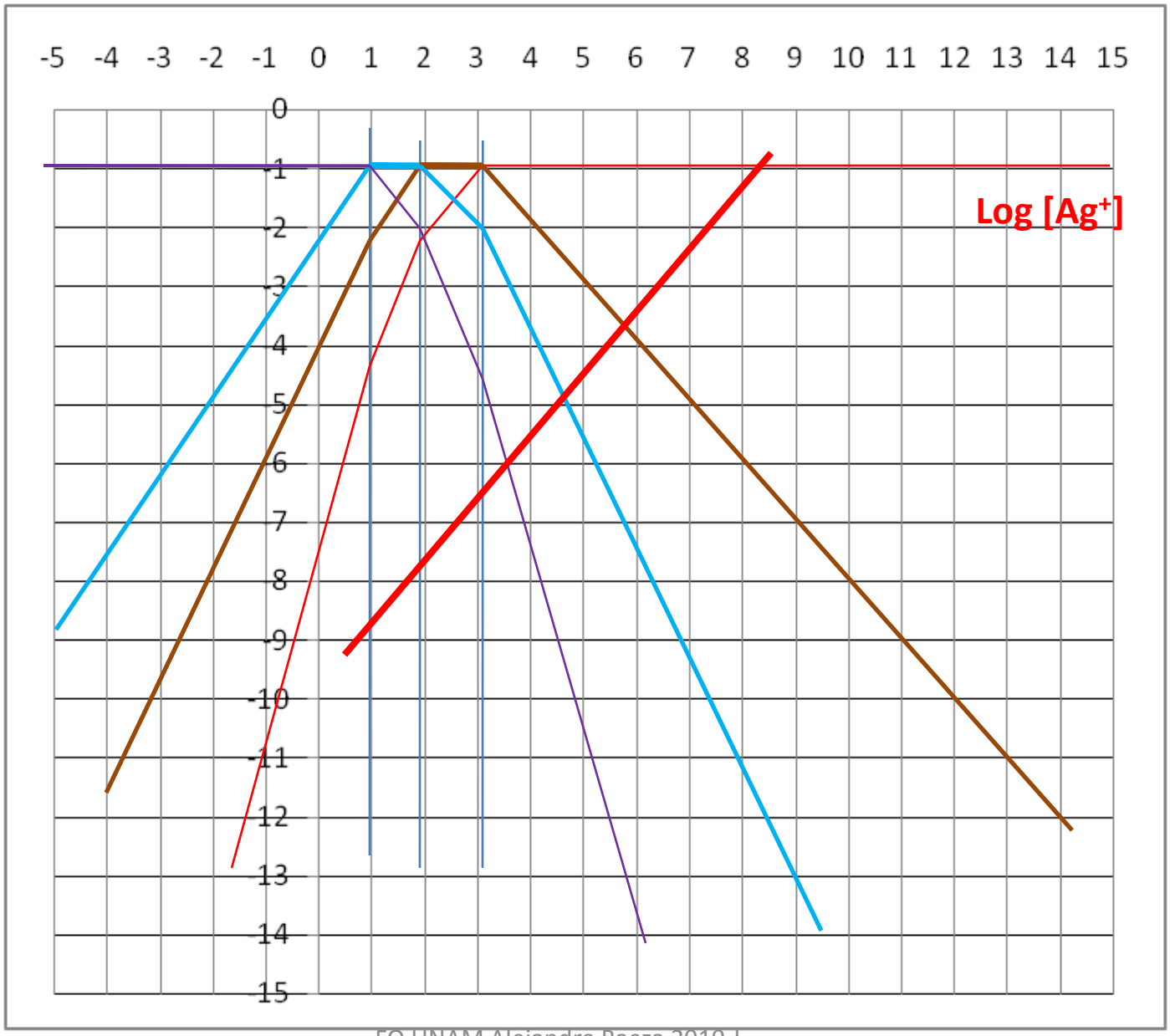

Log [AgCl3-2]
-5 -4 -3 -2 -1 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
0
-1
-2
-3
-4
-5
-6
-7
-8
-9
-10
-11
-12
-13
-14
-15


Log [AgCl3-2]
-5 -4 -3 -2 -1 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
0
-1
-2
-3
-4
-5
-6
-7
-8
-9
-10
-11
-12
-13
-14
-15

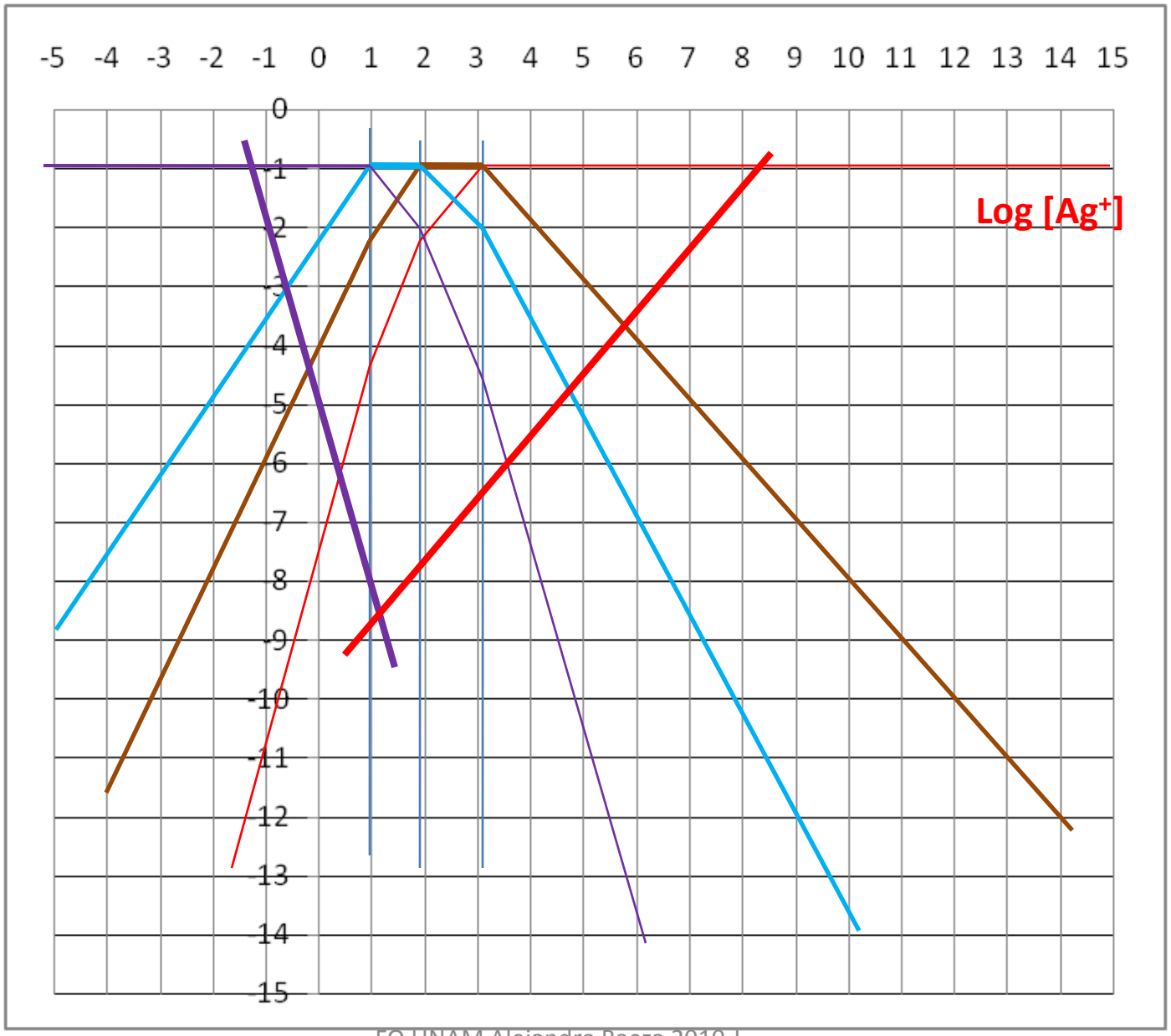

Log [AgCl3-2]
-5 -4 -3 -2 -1 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
0
-1
-2
-3
-4
-5
-6
-7
-8
-9
-10
-11
-12
-13
-14
-15


Log [AgCl3-2]
-5 -4 -3 -2 -1 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
0
-1
-2
-3
-4
-5
-6
-7
-8
-9
-10
-11
-12
-13
-14
-15

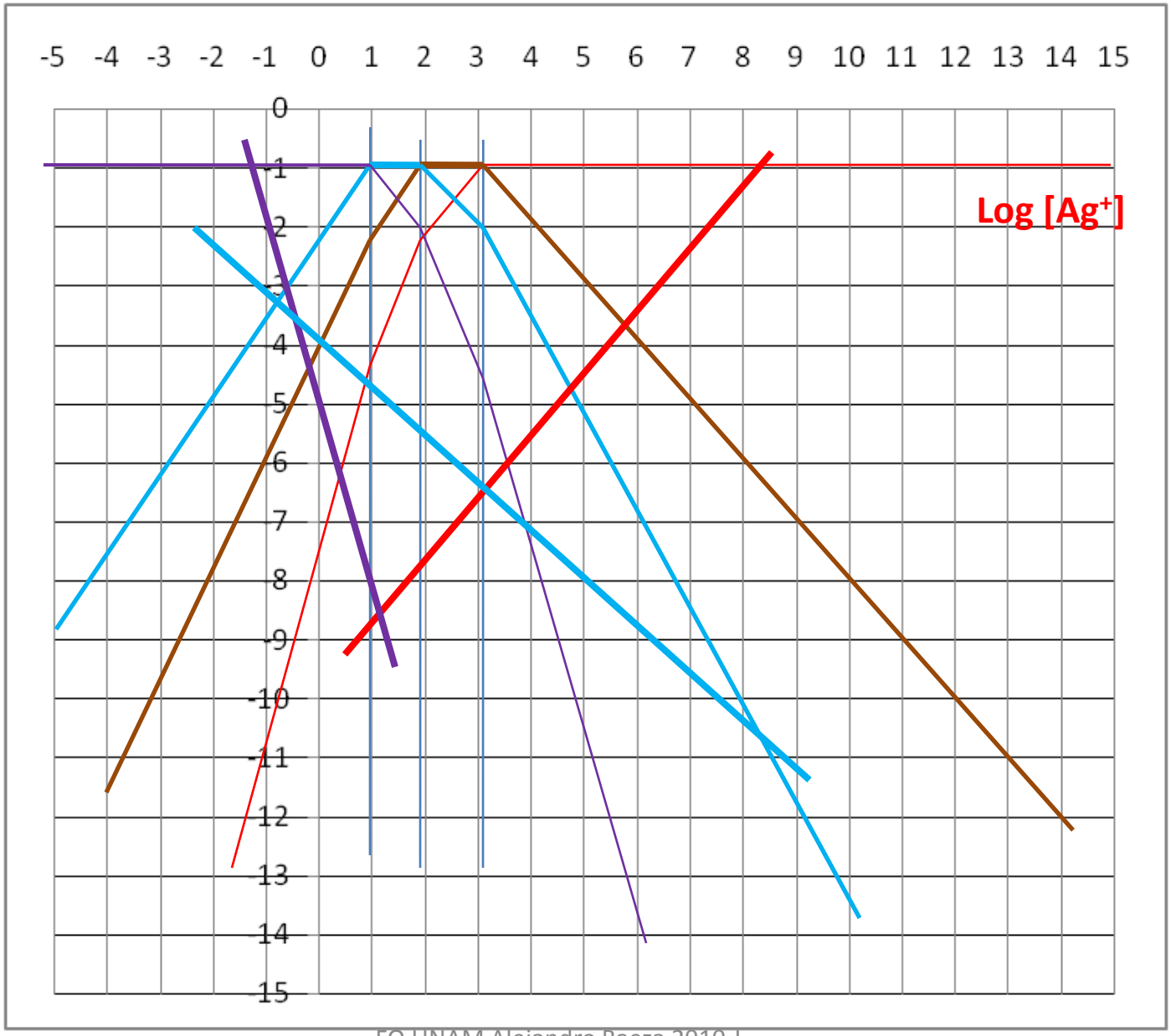
Transición HOMO↔HETERO↔HOMO:



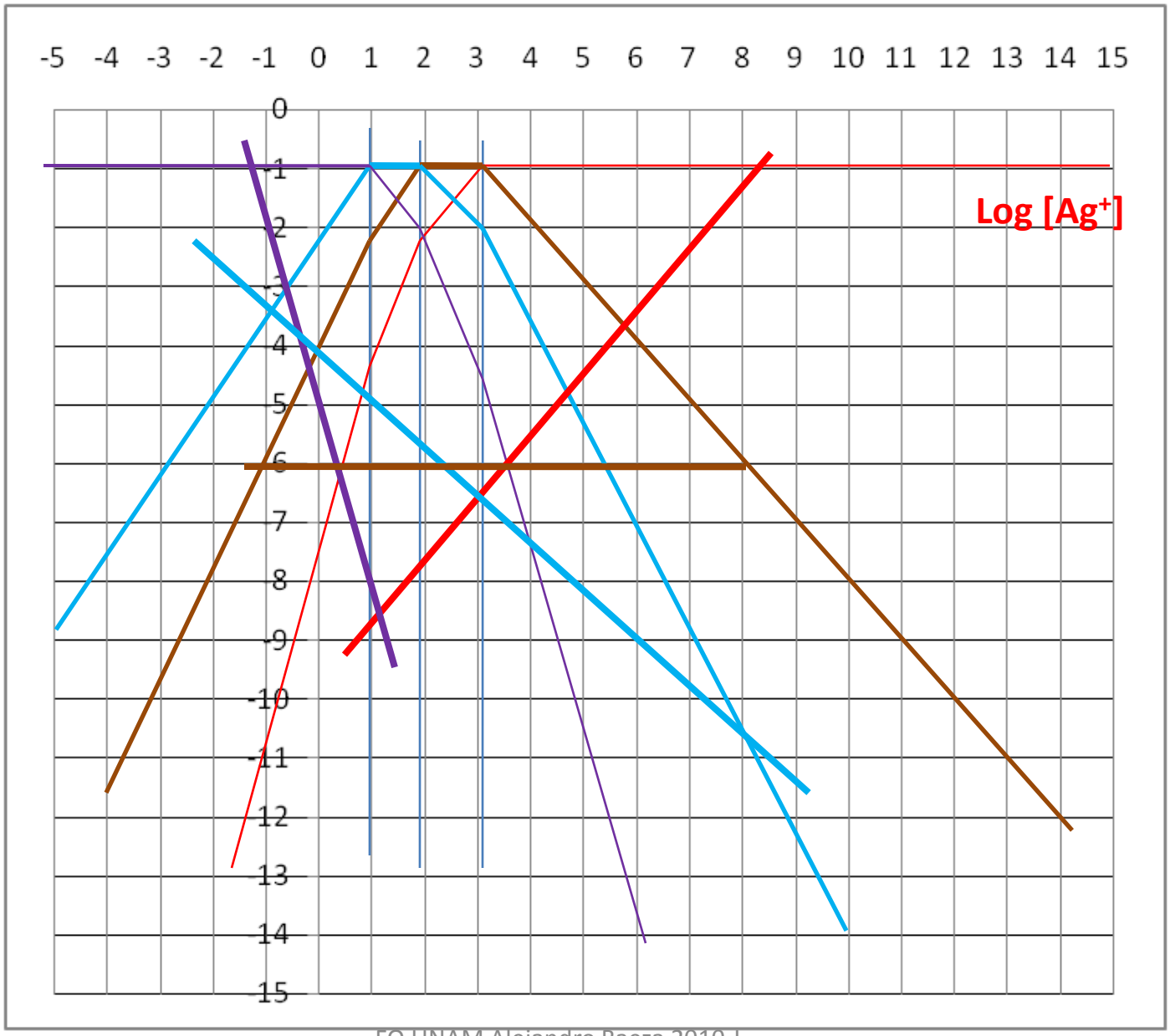
Transición HOMO↔HETERO↔HOMO:



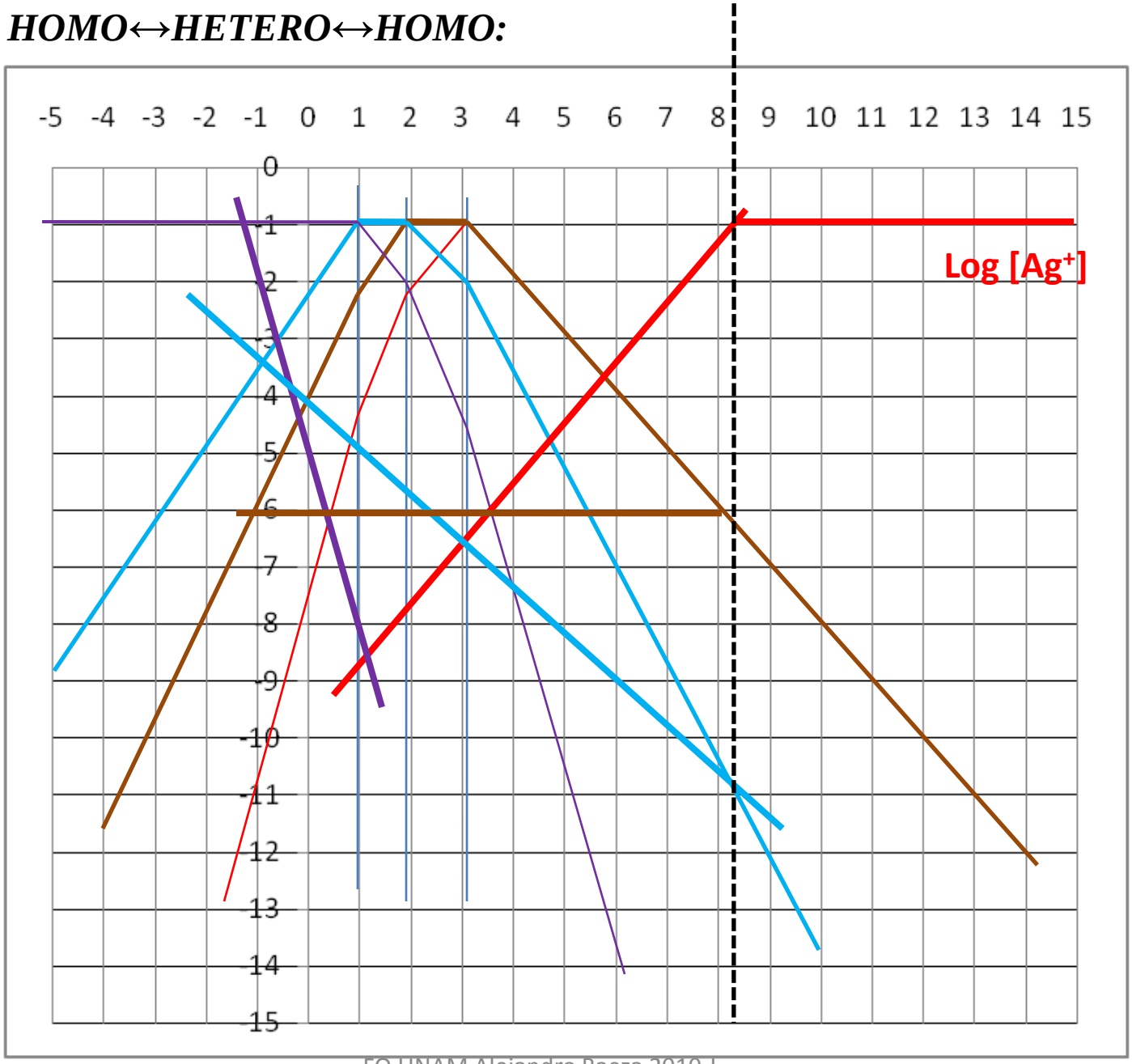
Transición HOMO↔HETERO↔HOMO:



Transición HOMO↔HETERO↔HOMO:



Transición HOMO↔HETERO↔HOMO:



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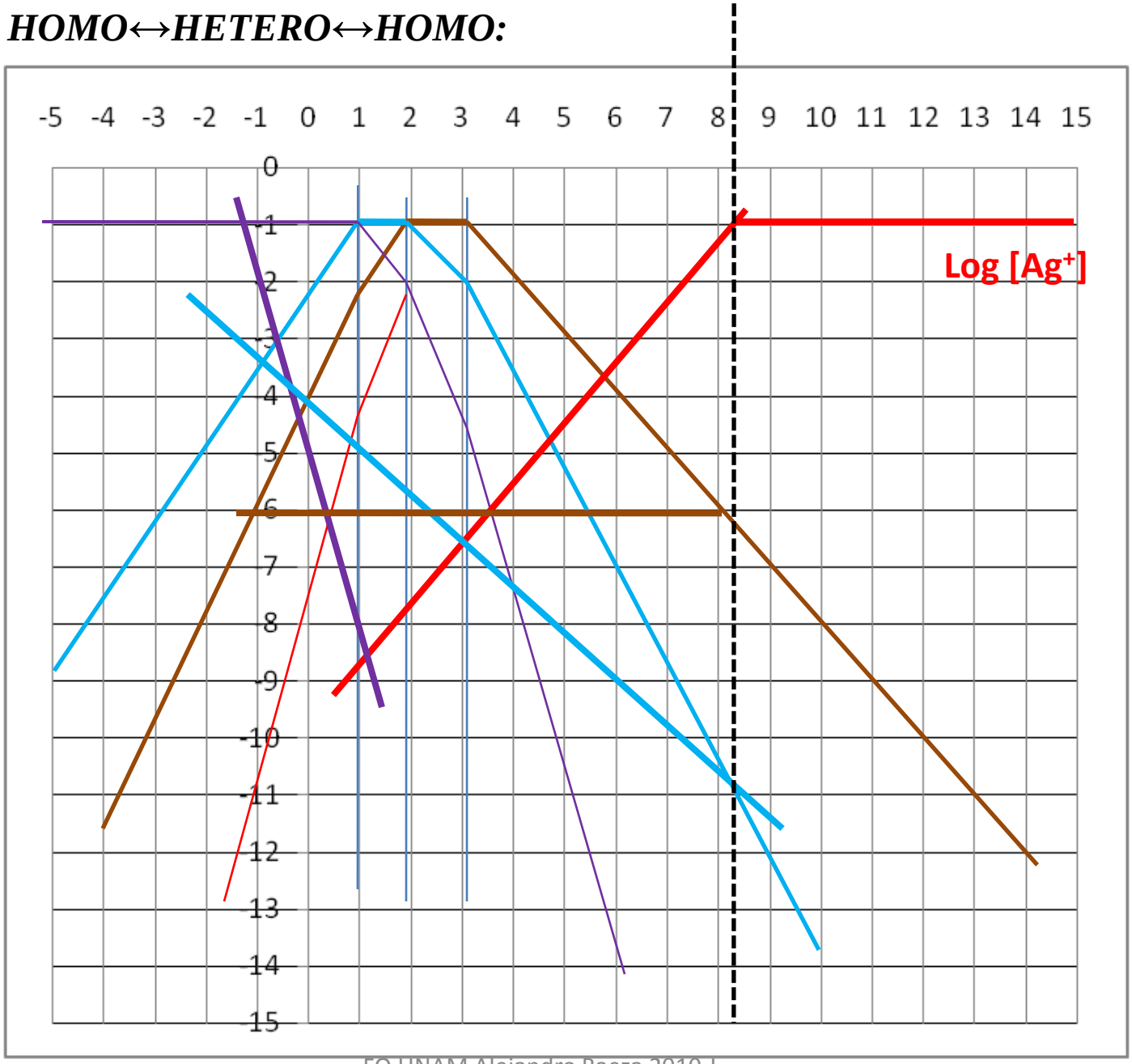

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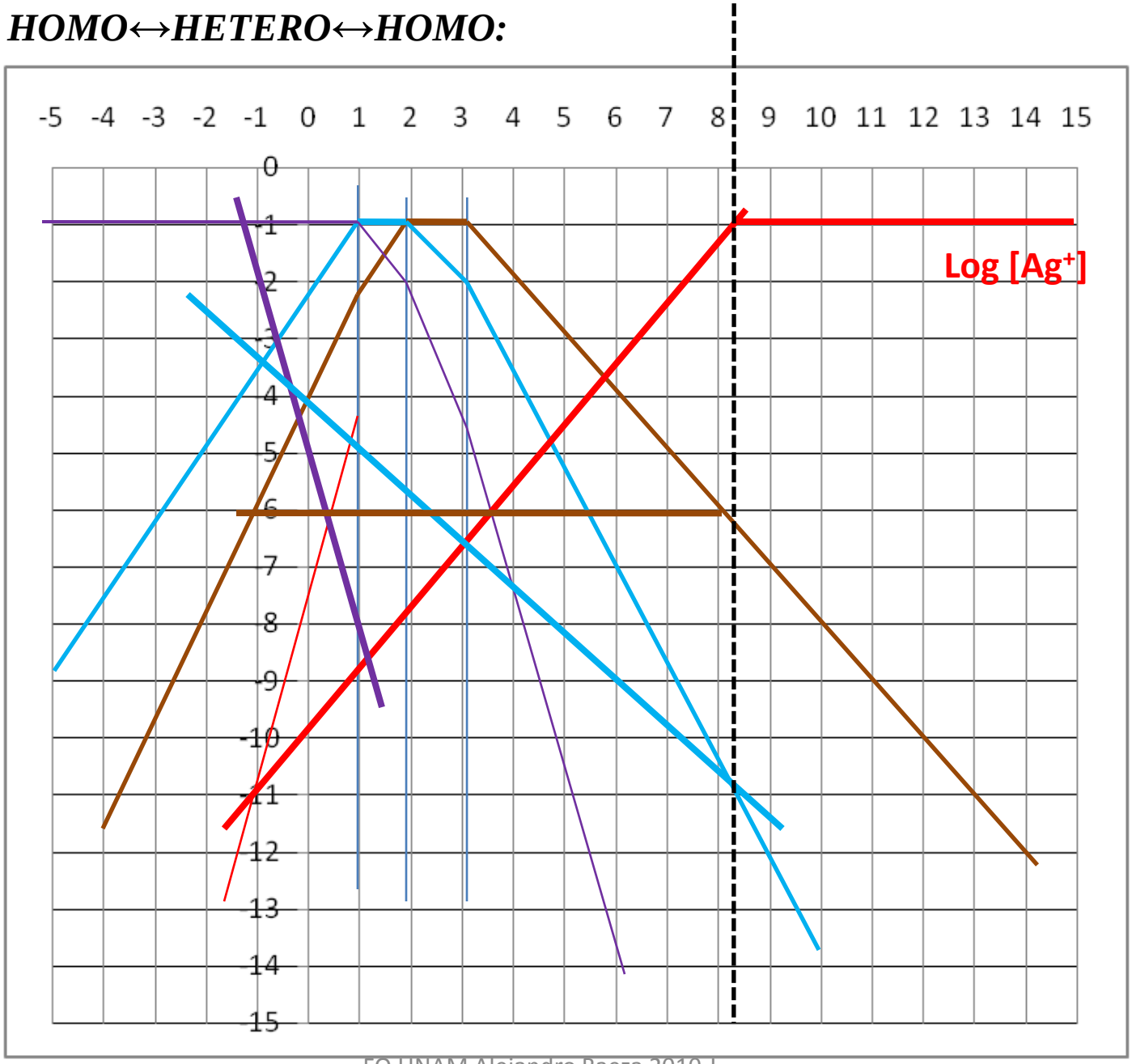

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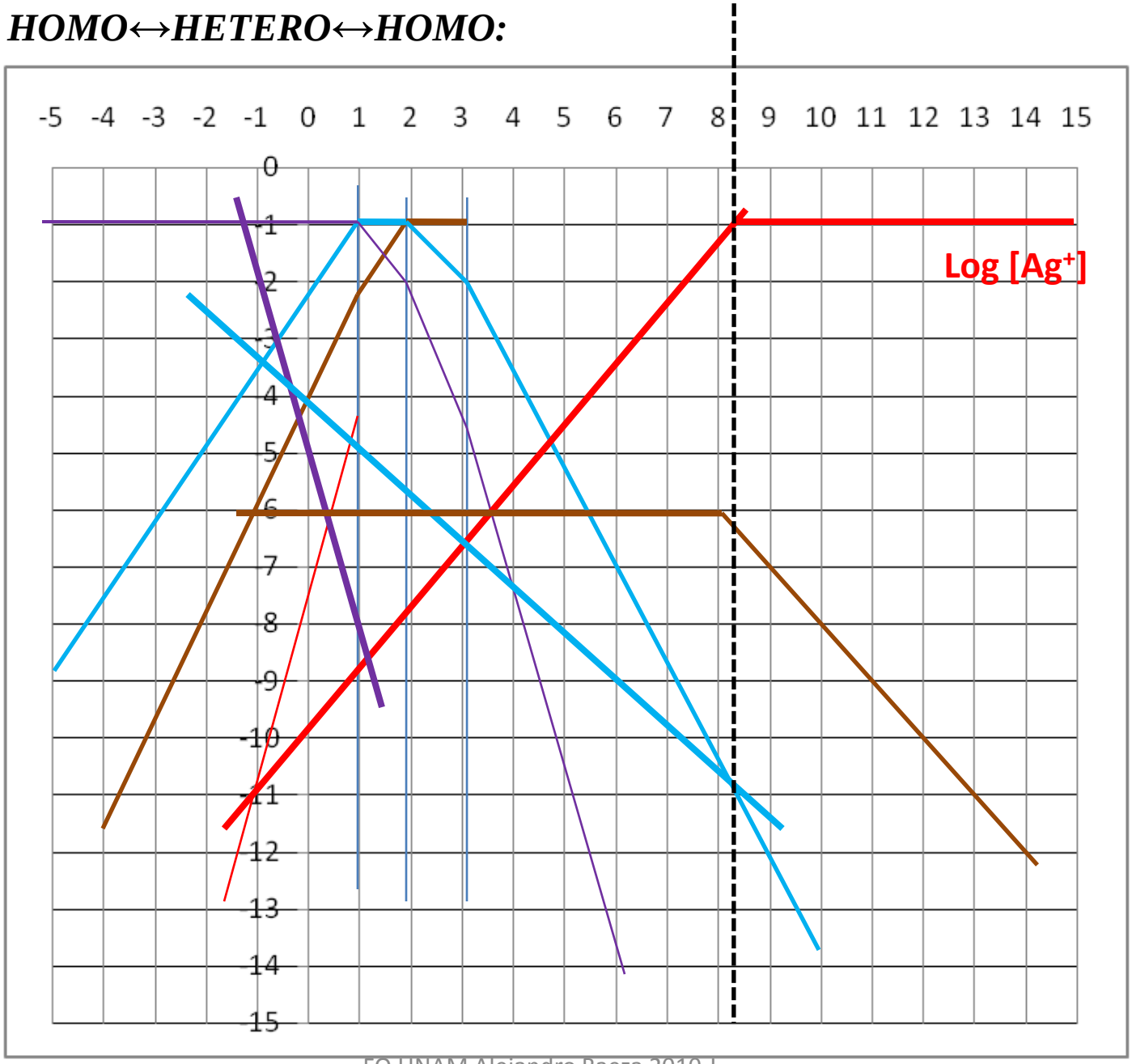

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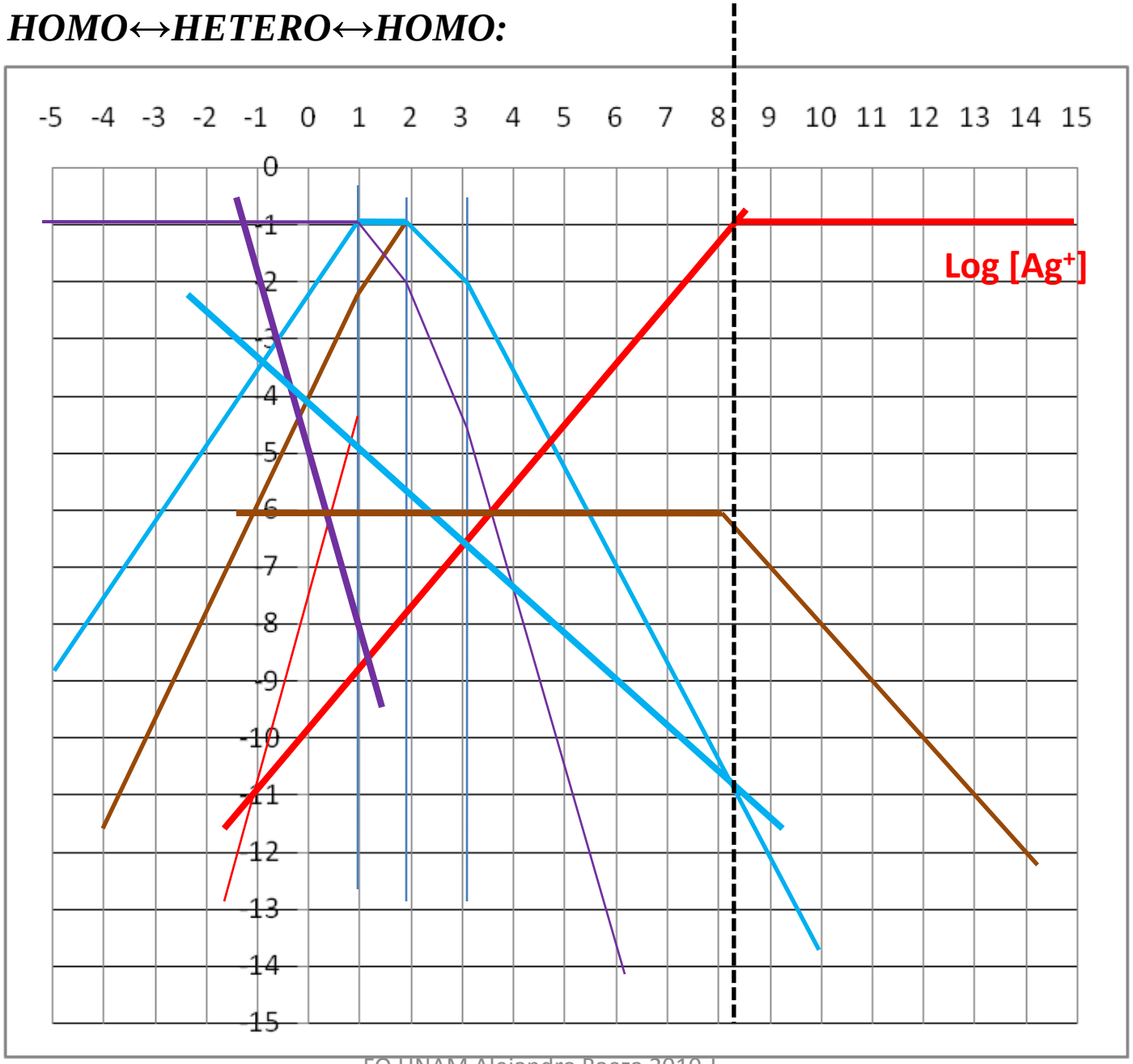

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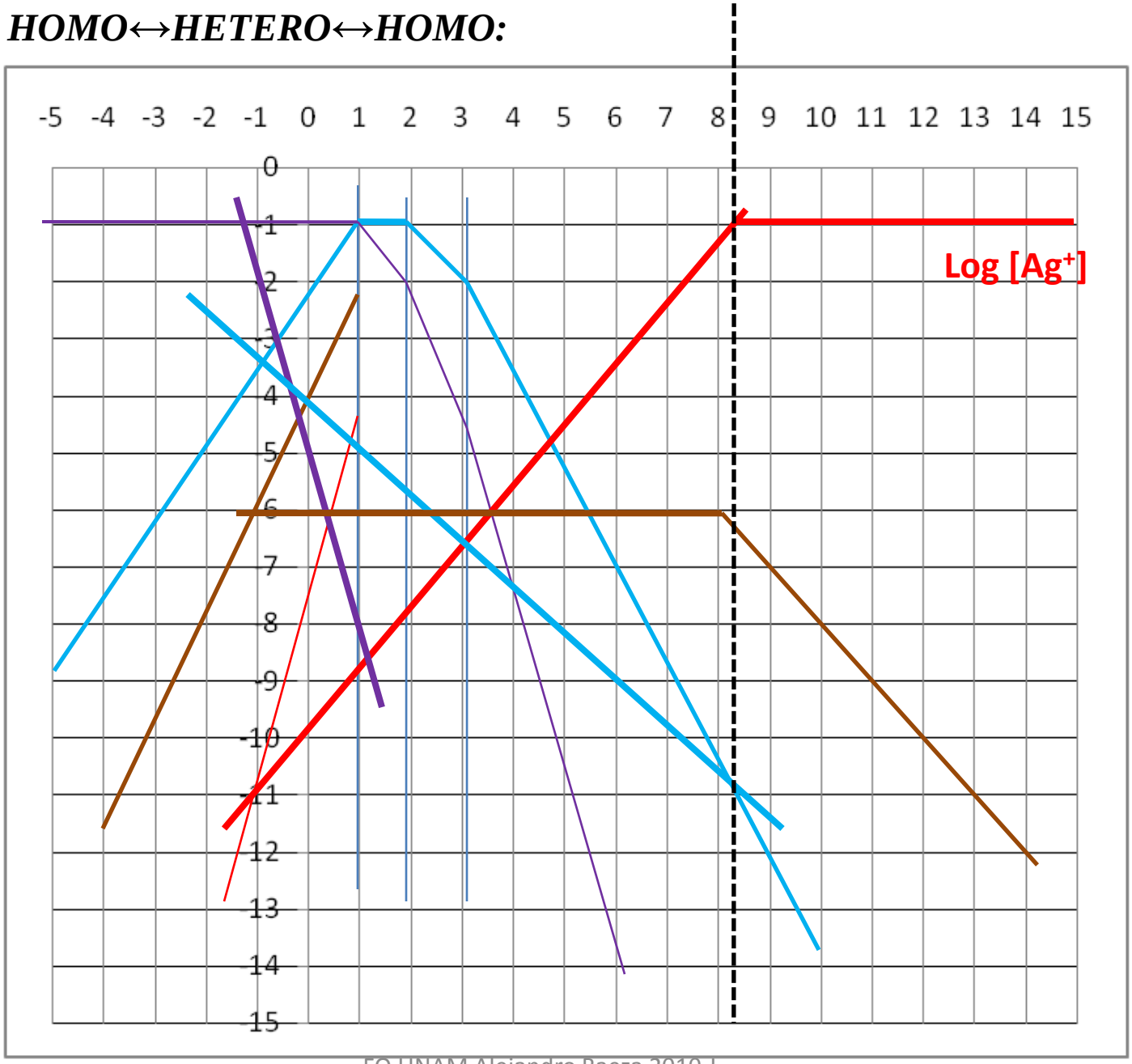

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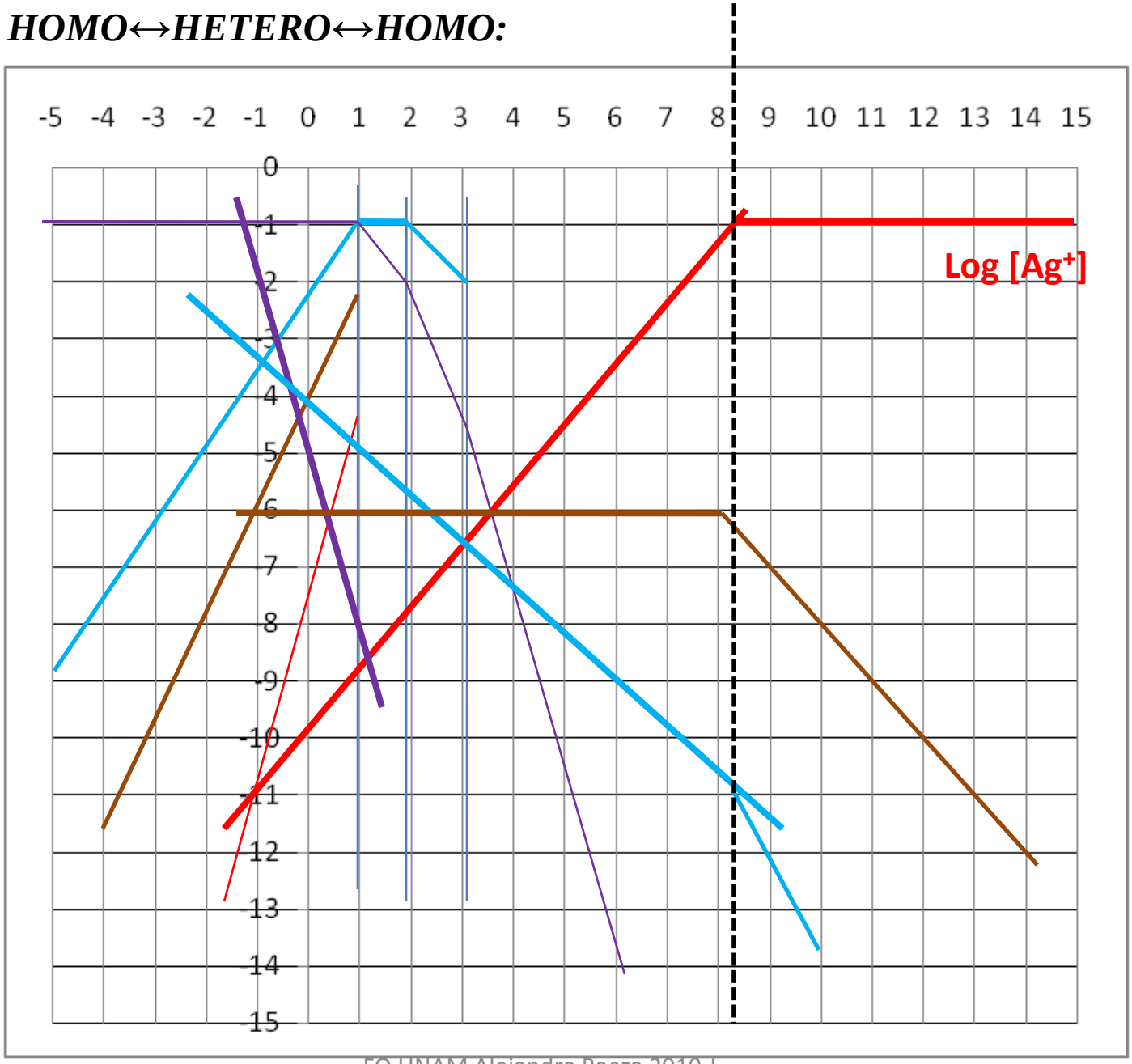

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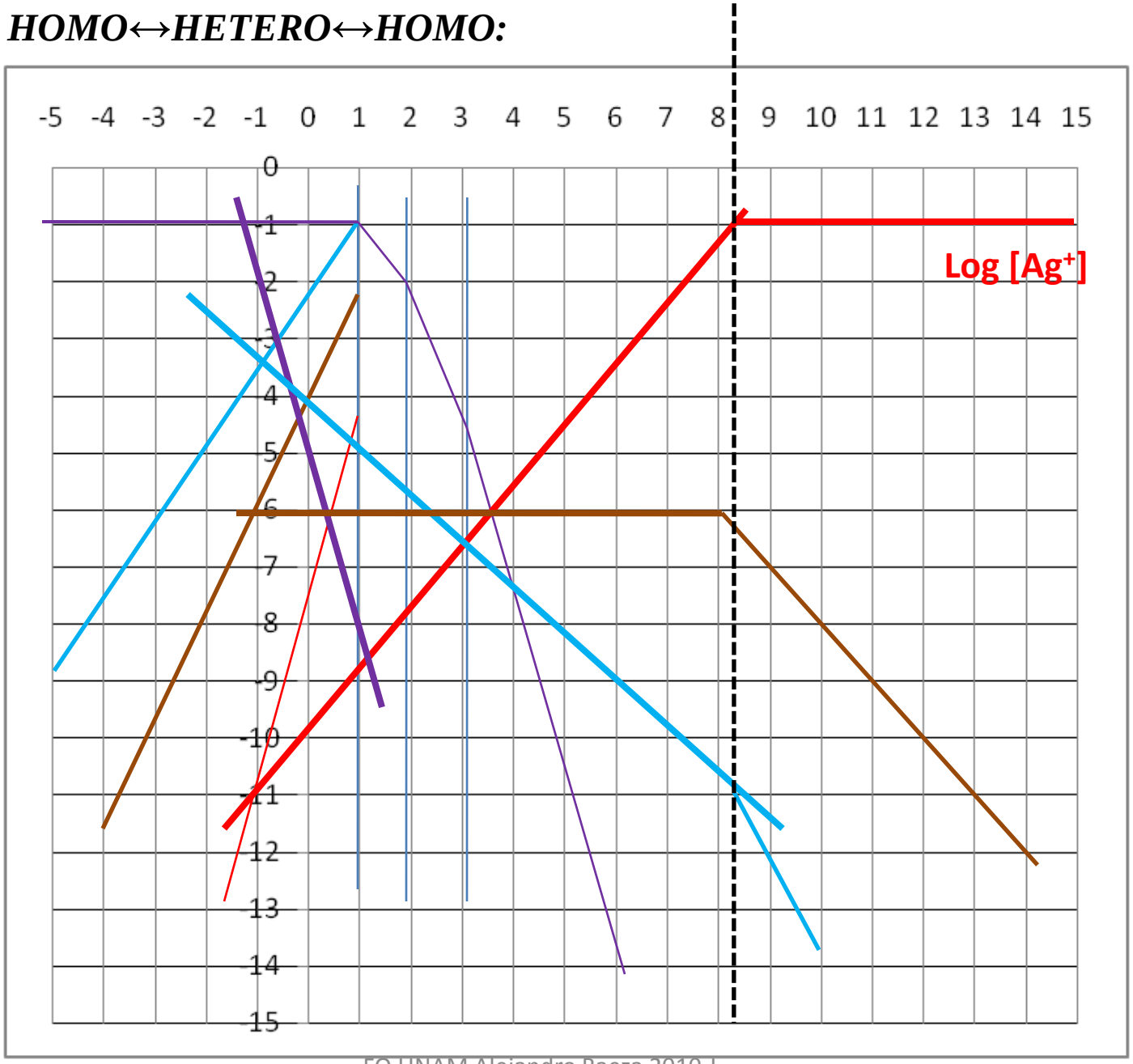

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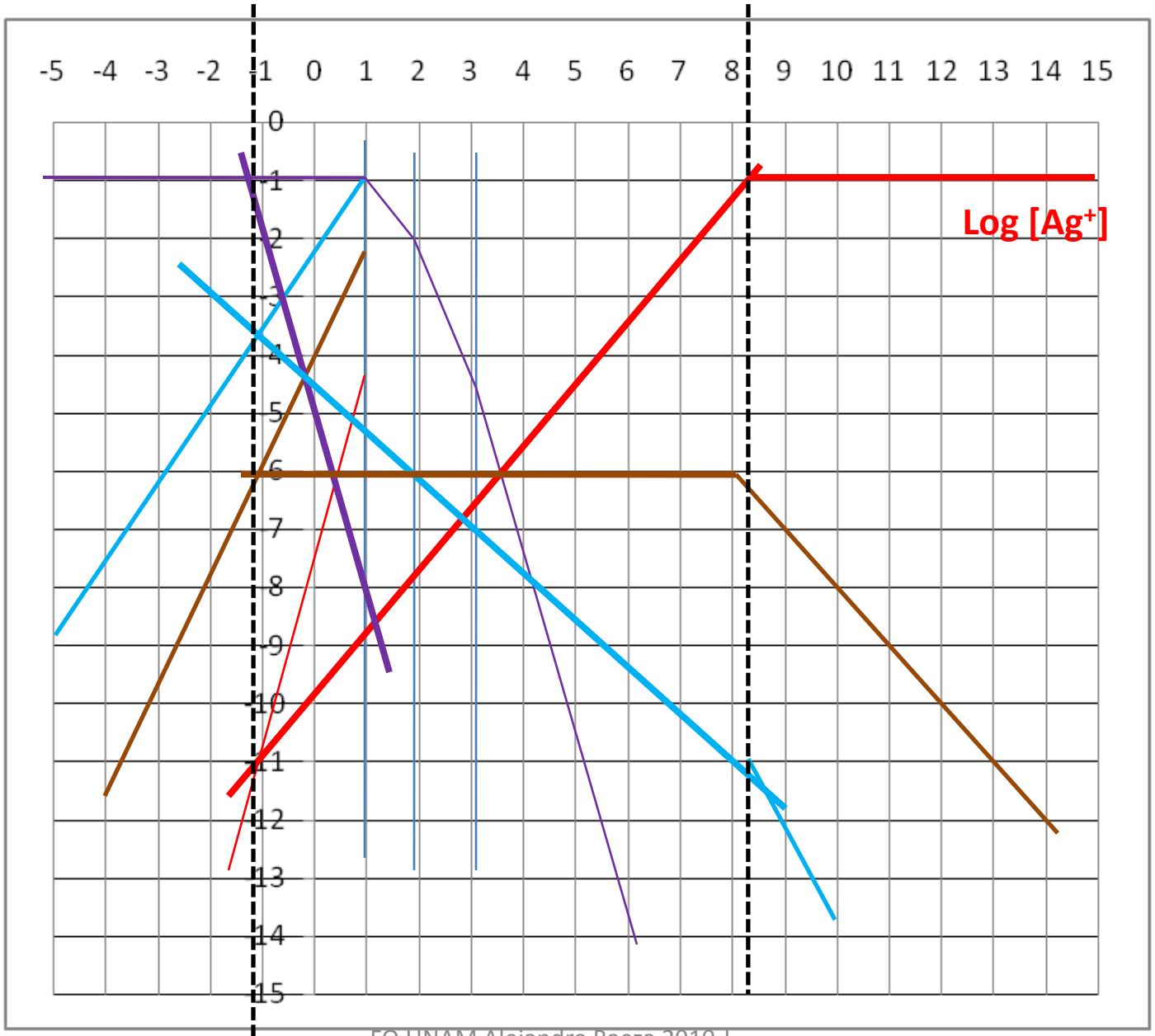

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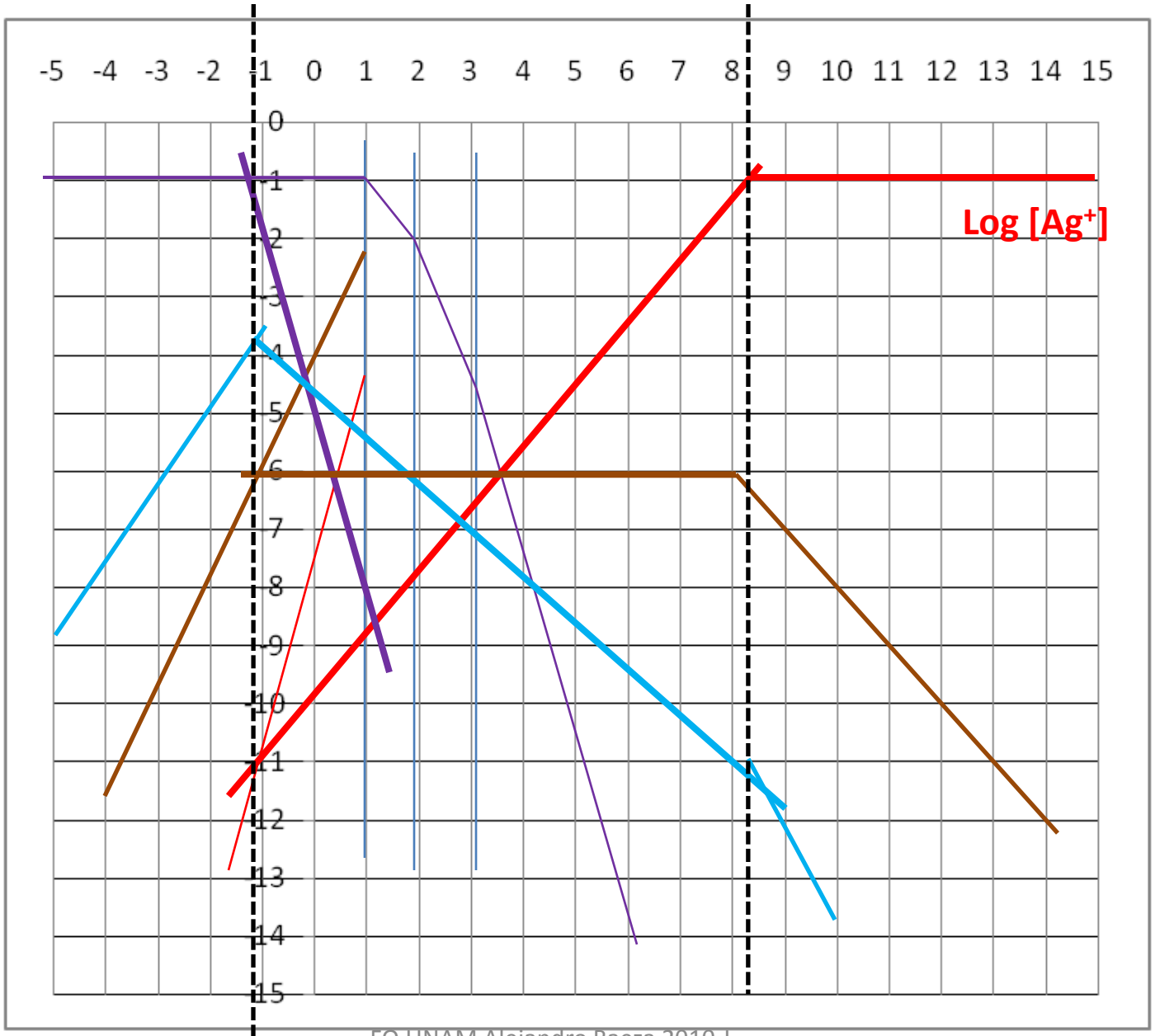

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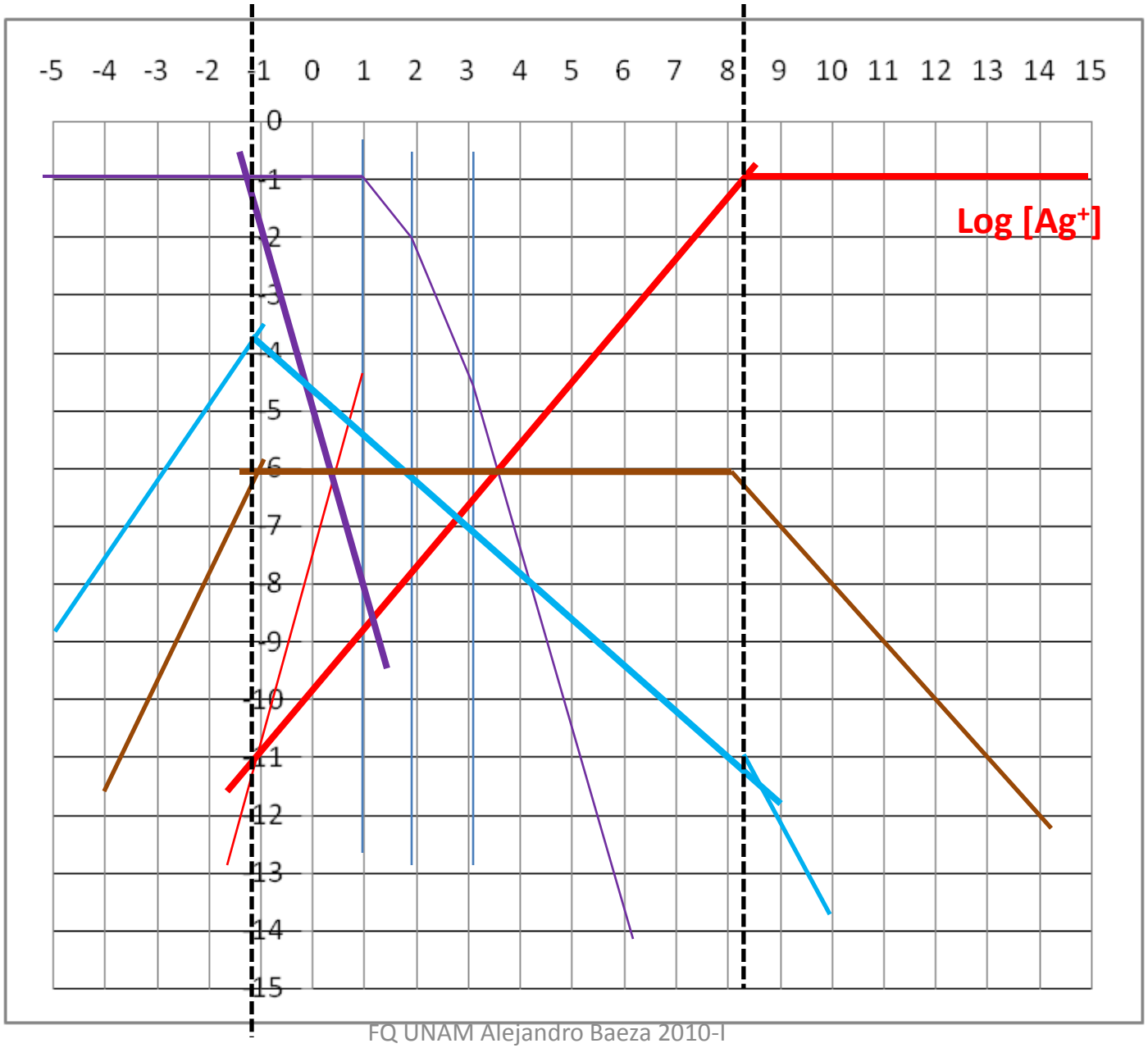

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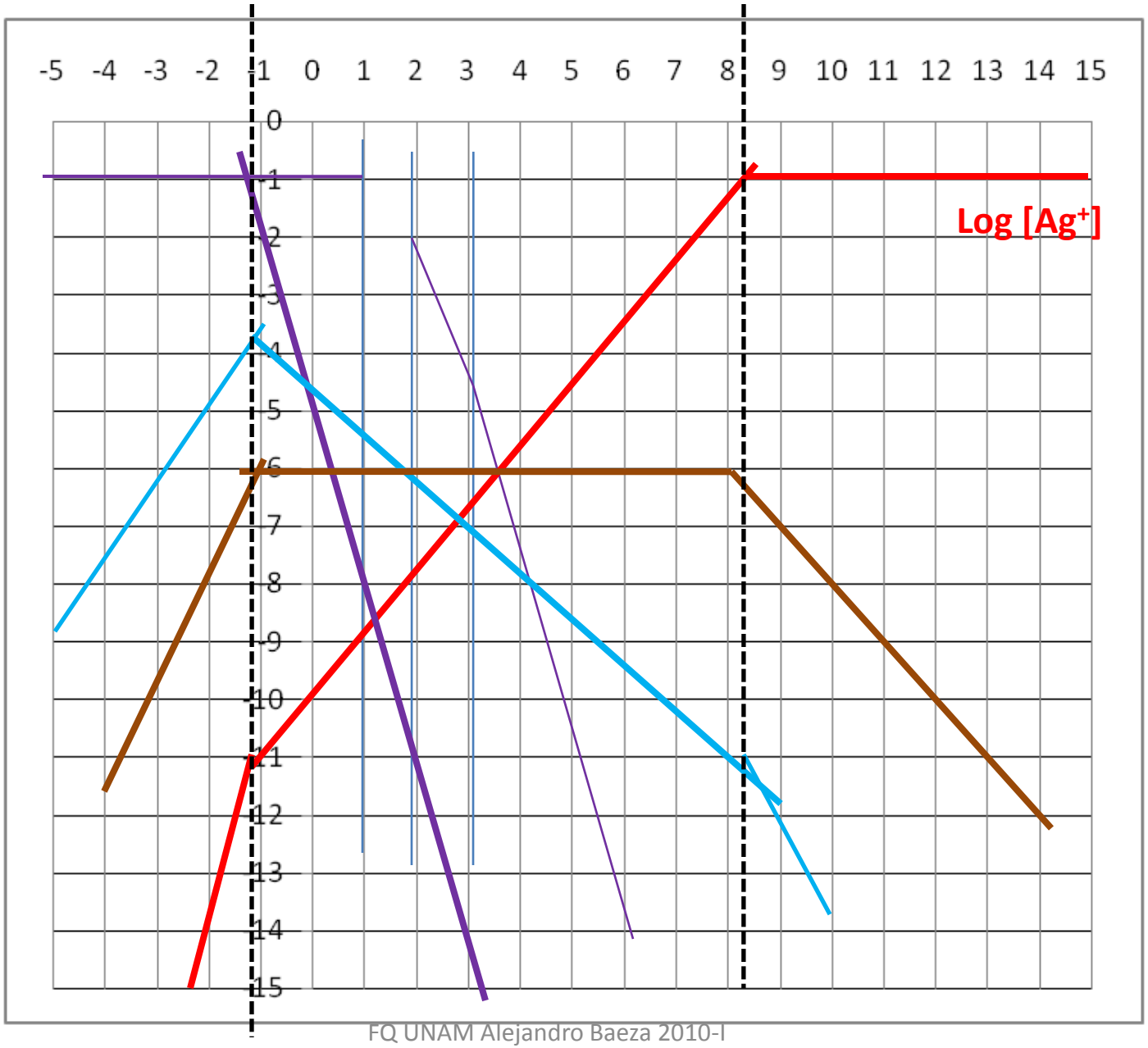

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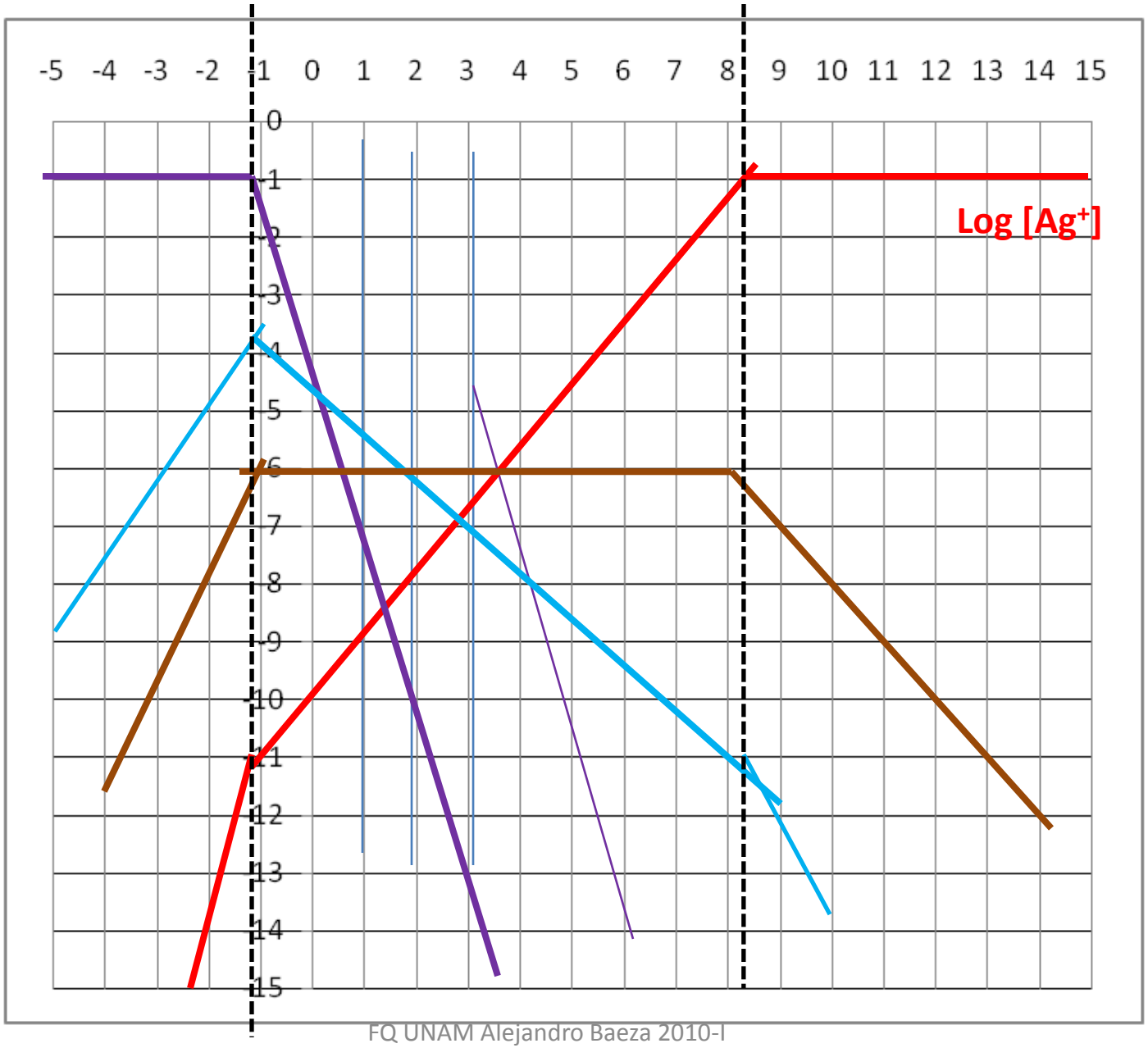

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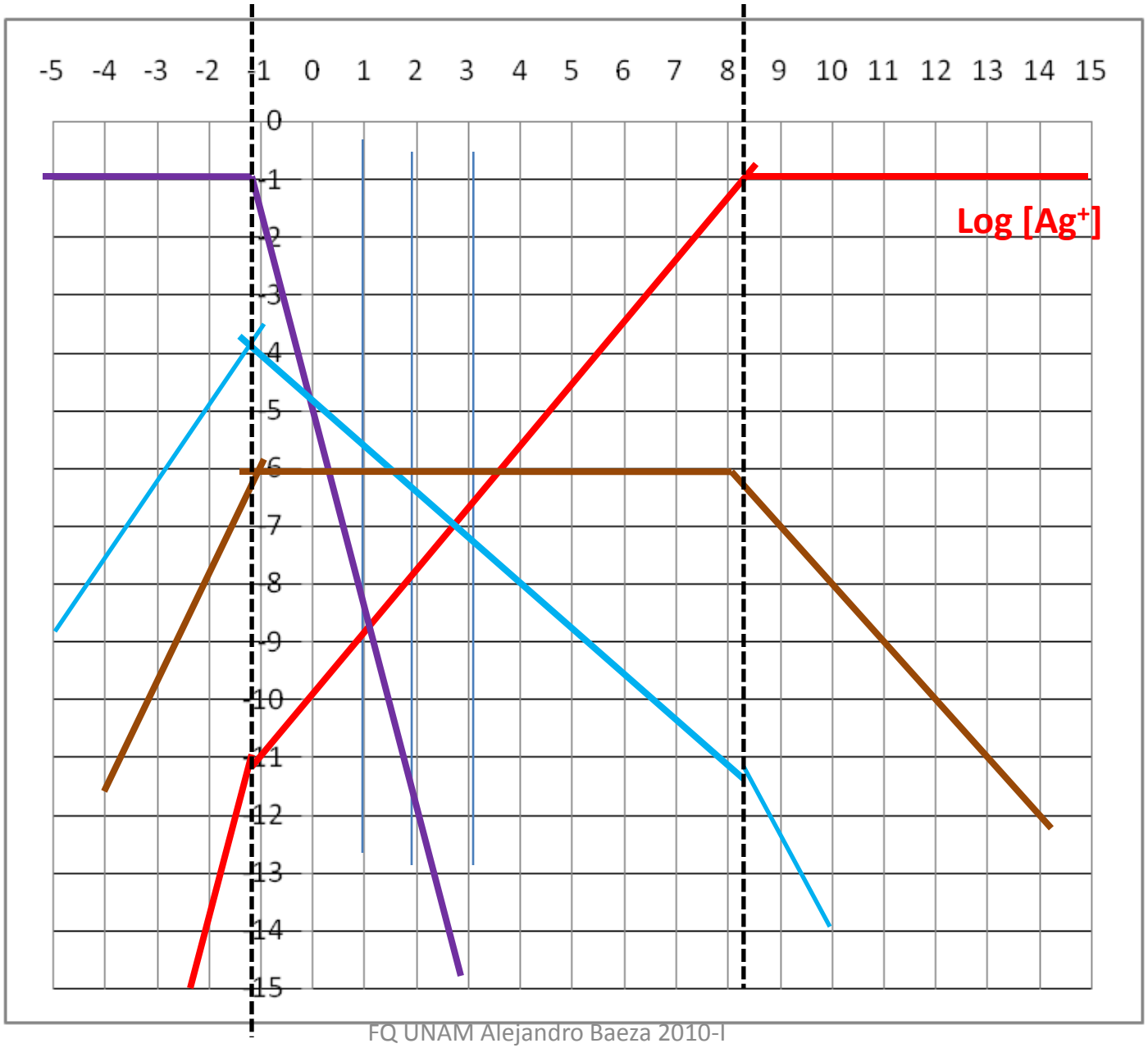
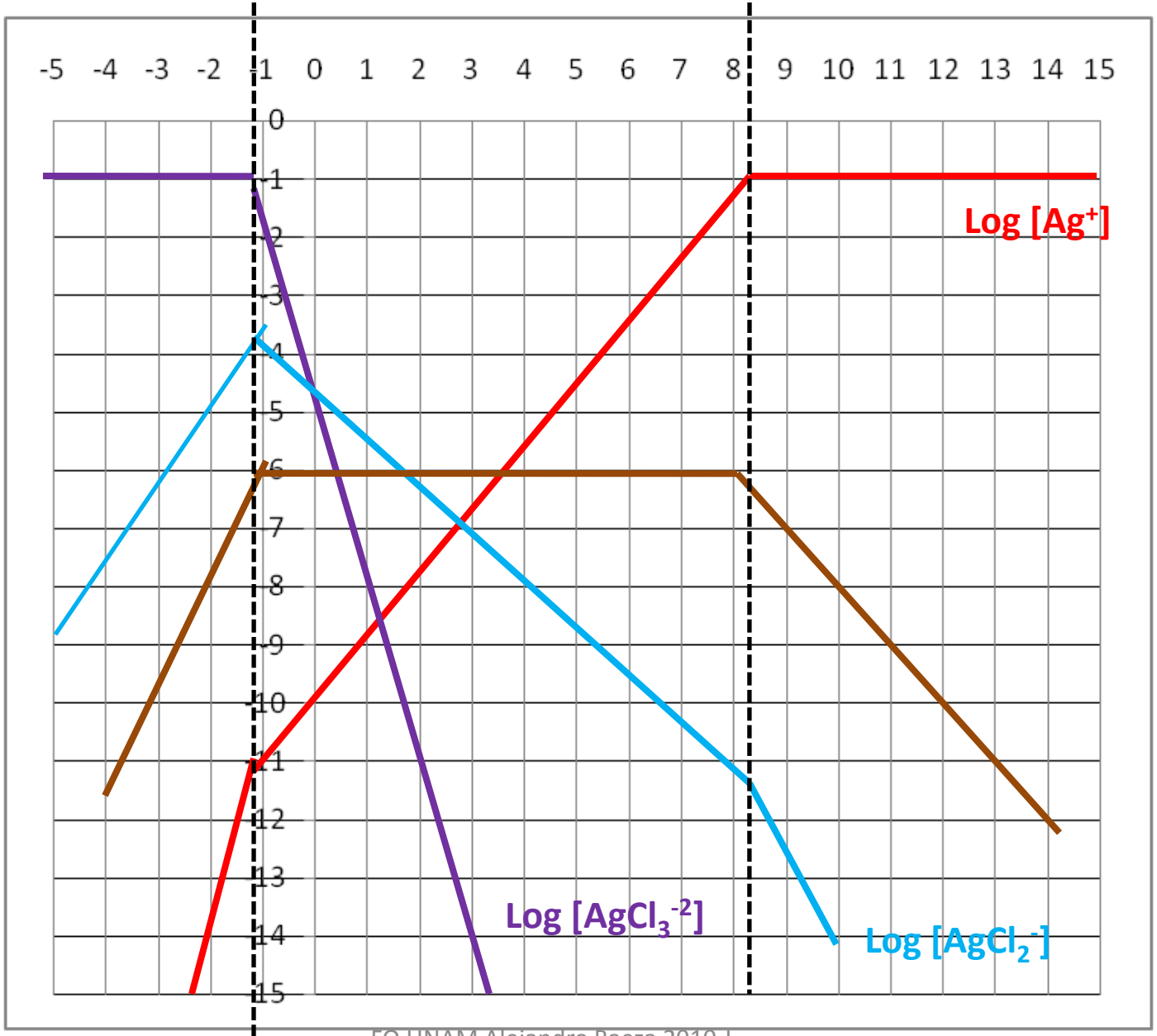


Transición HOMO ↔ HETERO ↔ HOMO:



Transición ***HOMO*** ↔ ***HETERO*** ↔ ***HOMO:***