Lim (x²-2x+1)/(4x-4) = ((1)²-2x1+1)/(4x1-4) = 0/0 **F.I.**

x->1

<

Lim (x-(1))xA *(quelque chose, c’est une méthode)*

x->1 (x-(1))xB *(quelque chose, c’est une méthode)*

<

4x-4=4(x-1)

x²-2x+1=0

4x-4=(x-1)

X²-2x+1=0

A=1

B=-2

C=1

∆=b²-4xAxC

∆=(-2)²-4x1x1

∆=4-4=0

X(0)= (-B)/(2A)

X(0)=(-(-2))/(2x1)=2/2=1

Forme factorisé :

x²-2x+1 =Ax(x-x(0))²

=1\*(x-1)²=(x-1)²=(x-1)\*(x-1)

x²-2x+1=(x-1)\*(x-1)

lim (x-1)\*(x-1) = (x-1) = 0 = 0

x->1 (x-1)\*4 4 4

<

Lim (x-1)\*(x-1) = (x-1) = 0 = 0

x->1 (x-1)\*4 4 4

>

Rappel :

Equation du 2nd degré :

ax²+bx+c

1ère étape :

∆=b²-4a\*c

2ème étape :

∆>0 ; 2 solutions

x(1)=(-b-racine(∆))/2\*a

x(2)=(-b+racine(∆))/2\*a

S={x(1) ; x(2)}

Forme factorisé :

a\*(x-x(1))\*(x-x(2))

|  |  |
| --- | --- |
| x | -inf x(1) x(2) +inf |
| a\*(x-x(1))\*(x-x(2)) | |  |  |  | | --- | --- | --- | | Signe (a) | Signe (-a) | Signe (a) | |

∆ = 0 “Une solution double”

x(0) = (-b)/(2a)

S={x(0)}

Forme factorisée :

=a\*(x-x(0))²

|  |  |
| --- | --- |
| x | -inf x(0) +inf |
| a\*(x-x(0))² | |  |  | | --- | --- | | Signe (a) | Signe(a) | |

∆ < 0 “Pas de solution”

|  |  |
| --- | --- |
| x | -inf +inf |
| ax²+bx+c | Signe(a) |