CURVAS

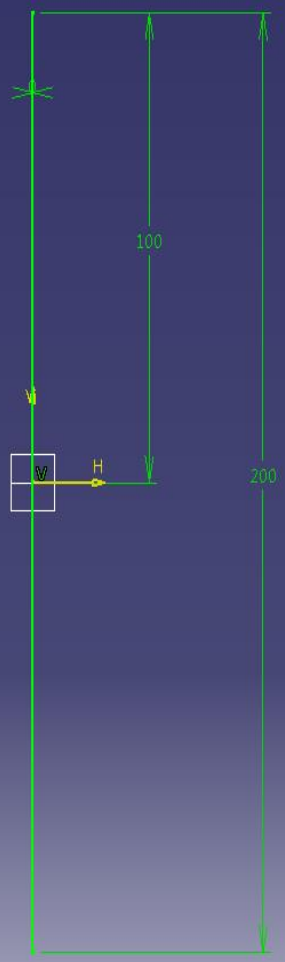
PARALELAS

CATIA V5 - [9.5.5 CURVAS PARALELAS]

Start ENOVIA V5 VPM File Edit View Insert Tools Window Help

9.5.5 CURVAS PARALELAS

- xy plane
- yz plane
- zx plane
- PartBody



Sketch sobre el plano XY, salimos y

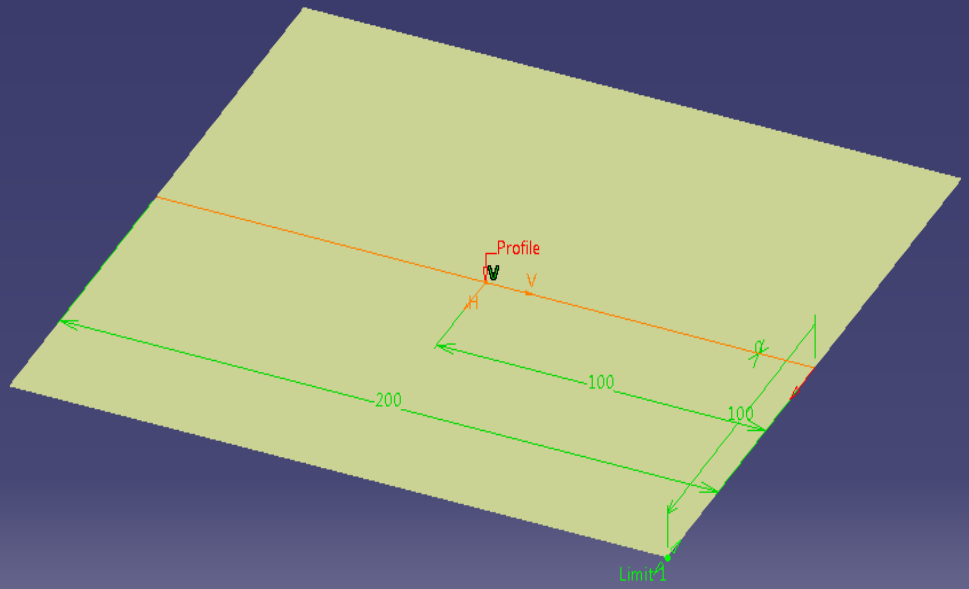
Select an object or a command

12:33
04/10/2014

CATIA V5 - [9.5.5_01 CURVAS PARALELAS.CATPart]

Start | ENOVIA V5 VPM | File | Edit | View | Insert | Tools | Window | Help

extruimos a 200 mm.



Extruded Surface Definition

Profile: Sketch.1

Direction: X Component

Extrusion Limits

Limit 1

Type: Dimension

Dimension: 100mm

Limit 2

Type: Dimension

Dimension: 100mm

Mirrored Extent

Reverse Direction

OK | Cancel | Preview

PartBody

Select the profile to be extruded

Limit 1 Dimension 100mm

12:59
04/10/2014

CATIA V5 - [9.5.5_01 CURVAS PARALELAS.CATPart]

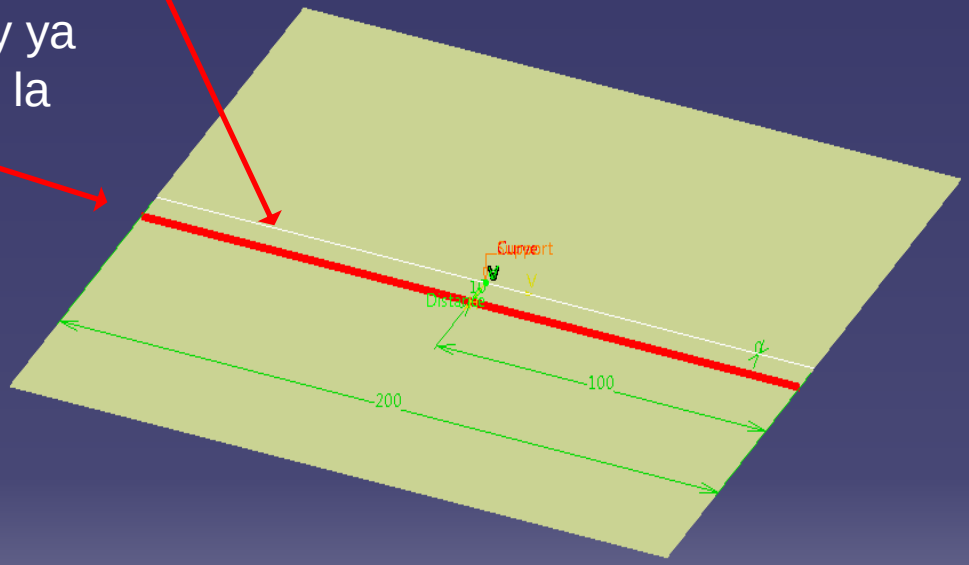
Start ENOVIA V5 VPM File Edit View Insert Tools Window Help

Para trazarle a esta recta una paralela

1) picamos el icono

2) rellenamos las casillas del cuadro de diálogo

3) picamos O.K., y ya tenemos en rojo la recta paralela



Parallel Curve Definition

Curve: Sketch.1
Support: Extrude.1
Constant: 10mm Law...
Point: No selection
Parameters
Parallel mode: Euclidean
Parallel corner type: Sharp
Smoothing
None Tangency Curvature
Reverse Direction
Both Sides
Repeat object after OK
OK Cancel Preview

PartBody

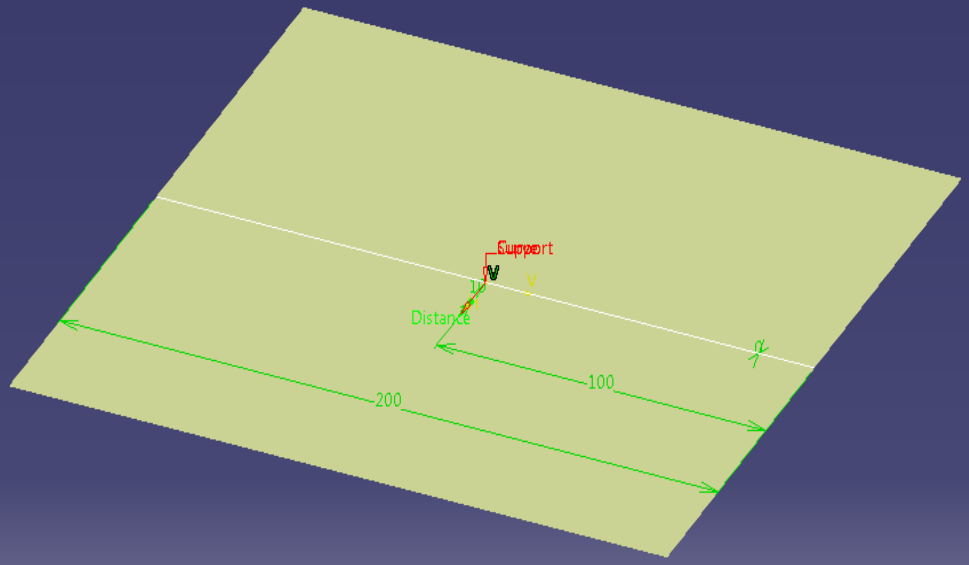
Select a user-defined law, specify the parameters defining a basic law or select a passing point

Offset 10mm

12:57
04/10/2014

CATIA V5 - [9.5.5_02 CURVAS PARALELAS_2.CATPart]

Start | ENOVIA V5 VPM | File | Edit | View | Insert | Tools | Window | Help



pero si seleccionamos esta opción

Parallel Curve Definition

Curve: Sketch.1
Support: Extrude.1
Constant: 10mm | Law...
Point: No selection

Parameters
Parallel mode: Euclidean
Parallel corner type: Sharp

Smoothing
None | Tangency | Curvature

Reverse Direction
Both Sides
Repeat object after OK

OK | Cancel | Preview

PartBody

Select a user-defined law, specify the parameters defining a basic law or select a passing point

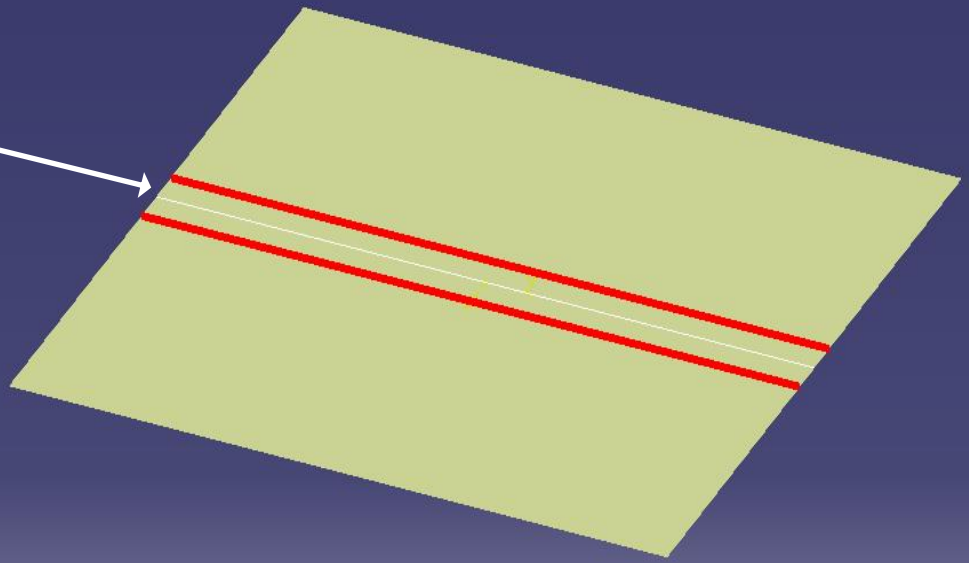
Offset 10mm

12:05
05/10/2014

CATIA V5 - [9.5.5_02 CURVAS PARALELAS_2.CATPart]

Start ENOVIA V5 VPM File Edit View Insert Tools Window Help

nos traza paralelas equidistantes a ambos lados de la curva origen



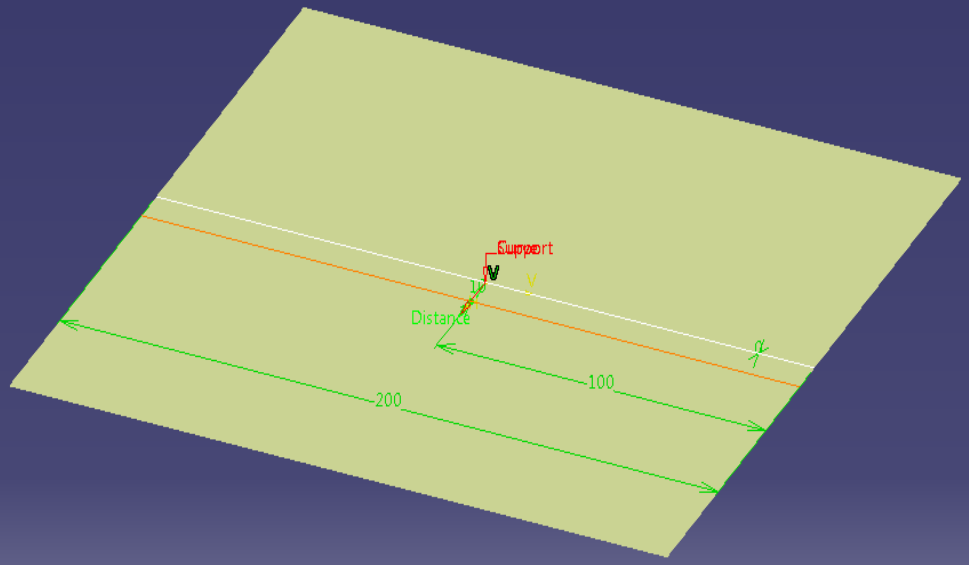
PartBody

Select an object or a command

12:07
05/10/2014

CATIA V5 - [9.5.5_03CURVAS PARALELAS_4.CATPart]

Start | ENOVIA V5 VPM | File | Edit | View | Insert | Tools | Window | Help



si seleccionamos esta opción

Parallel Curve Definition

Curve: Sketch.1
Support: Extrude.1
Constant: 10mm [Law...]
Point: No selection

Parameters
Parallel mode: Euclidean
Parallel corner type: Sharp

Smoothing
None | Tangency | Curvature

Reverse Direction
Both Sides
Repeat object after OK

OK | Cancel | Preview

PartBody

Select a user-defined law, specify the parameters defining a basic law or select a passing point

Offset 10mm

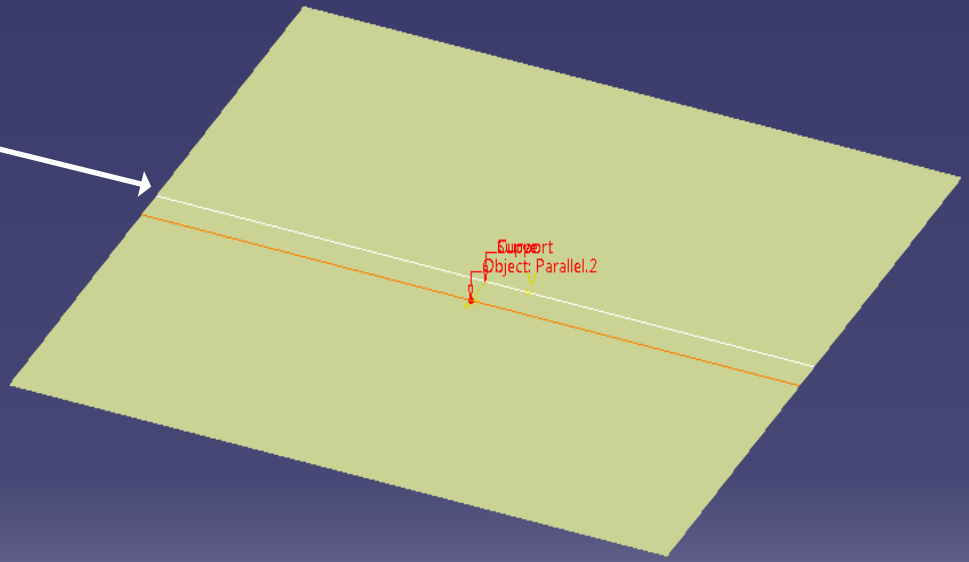
12:22
05/10/2014

CATIA V5 - [9.5.5_03CURVAS PARALELAS_4.CATPart]

Start ENOVIA V5 VPM File Edit View Insert Tools Window Help

nos aparece este cuadro de diálogo en el que podemos seleccionar el número de paralelas de la curva origen

CURVA ORIGEN



Running Commands

Parallel.2 Object Repetition

Object Repetition

Instance(s): 4

Mode for Repetition

Absolute Relative

Create in a new Body

OK Cancel

PartBody

Select the object to repeat

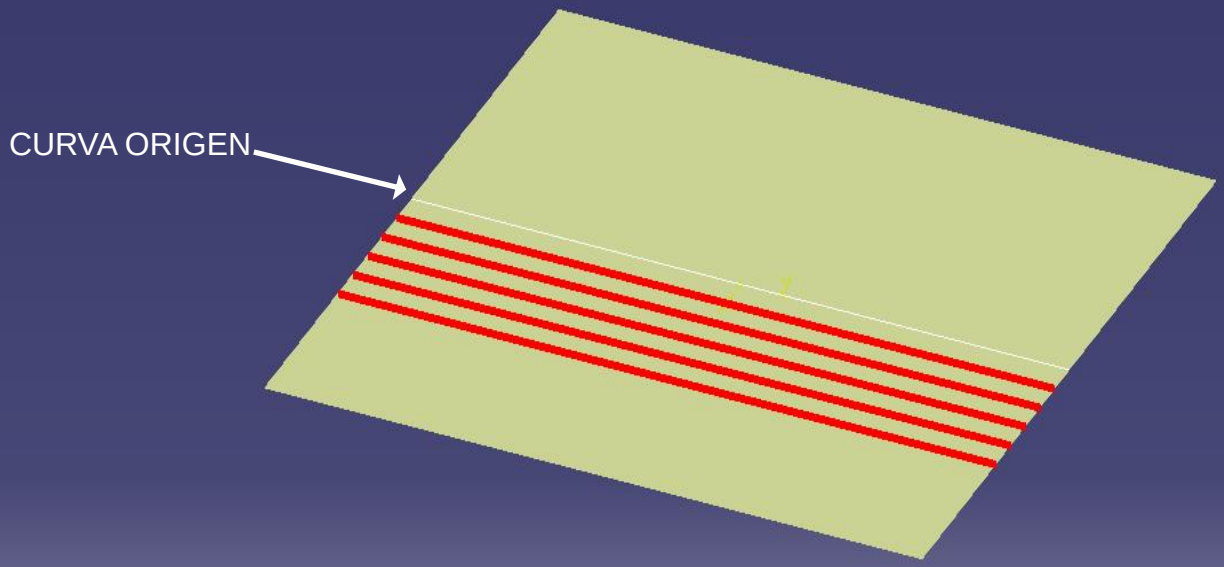
Spinner 4

12:23
05/10/2014

CATIA V5 - [9.5.5_03CURVAS PARALELAS_4.CATPart]

Start ENOVIA V5 VPM File Edit View Insert Tools Window Help

que en nuestro caso sería



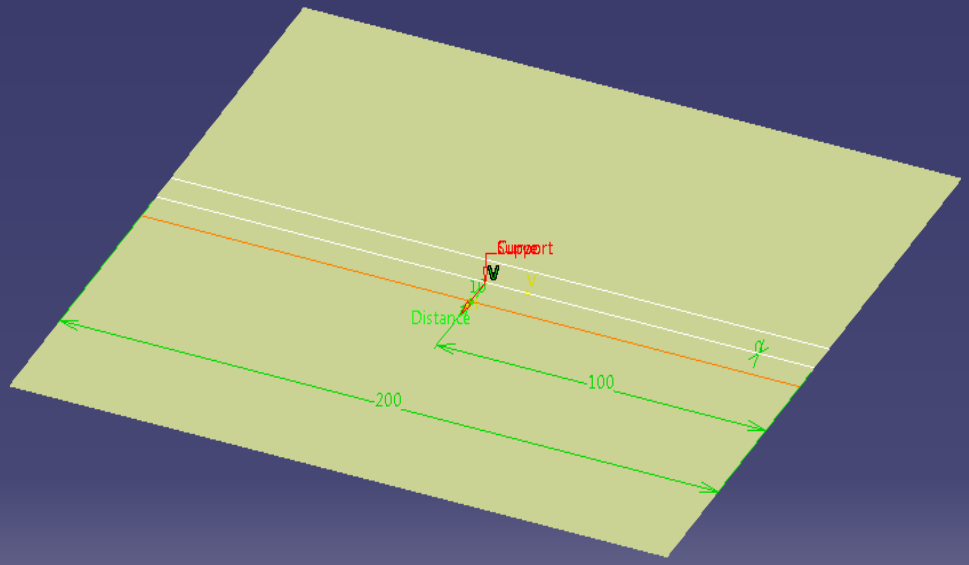
Ordered Geometrical Set.1

Select an object or a command

12:24
05/10/2014

CATIA V5 - [9.5.5_04 CURVAS PARALELAS_4.CATPart]

Start | ENOVIA V5 VPM | File | Edit | View | Insert | Tools | Window | Help



si en la operación anterior, además activamos esta opción

Parallel Curve Definition

Curve: Sketch.1
Support: Extrude.1
Constant: 10mm
Law...
Point: No selection

Parameters
Parallel mode: Euclidean
Parallel corner type: Sharp

Smoothing
None | Tangency | Curvature

Reverse Direction
Both Sides
Repeat object after OK

OK | Cancel | Preview

PartBody

Select a user-defined law, specify the parameters defining a basic law or select a passing point

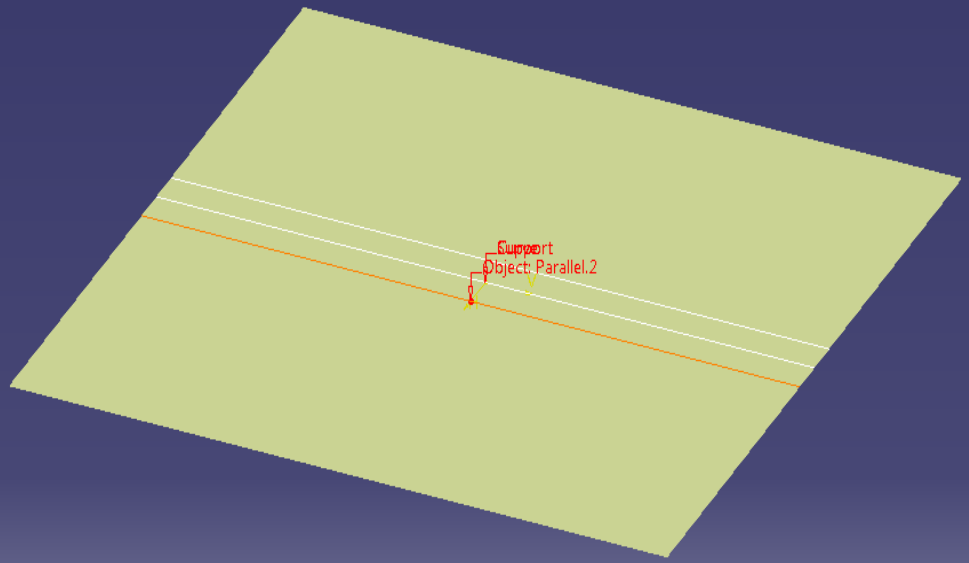
Offset 10mm

12:28
05/10/2014

CATIA V5 - [9.5.5_04 CURVAS PARALELAS_4.CATPart]

Start ENOVIA V5 VPM File Edit View Insert Tools Window Help

y seleccionamos ocho repeticiones



Running Commands

Parallel.2 Object Repetition

Object Repetition

Instance(s): 8

Mode for Repetition

Absolute Relative

Create in a new Body

OK Cancel

PartBody

Select the object to repeat

Spinner 8

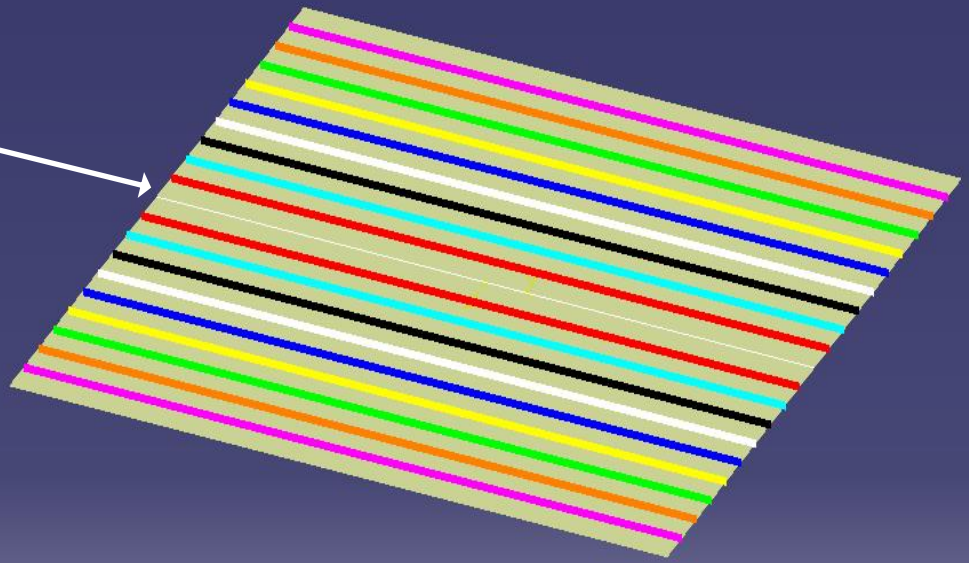
12:30
05/10/2014

CATIA V5 - [9.5.5_04 CURVAS PARALELAS_4.CATPart]

Start ENOVIA V5 VPM File Edit View Insert Tools Window Help

nos queda

CURVA ORIGEN



Ordered Geometrical Set.1

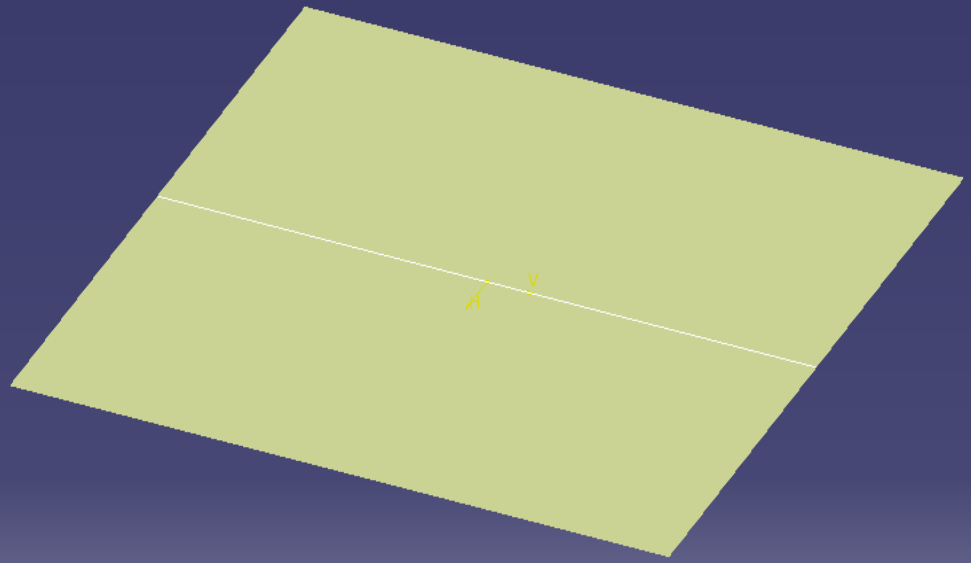
Select an object or a command

12:36
05/10/2014

CATIA V5 - [zapato_2.CATPart]

Start ENOVIA V5 VPM File Edit View Insert Tools Window Help

Podemos obtener curvas de distancia variable picando en ***law***



Parallel Curve Definition

Curve: No selection

Support: No selection

Constant: 25mm Law...

Point: No selection

Parameters

Parallel mode: Euclidean

Parallel corner type: Sharp

Smoothing

None Tangency Curvature

Reverse Direction

Both Sides

Repeat object after OK

OK Cancel Preview

PartBody

Modify specifications then press OK or Cancel

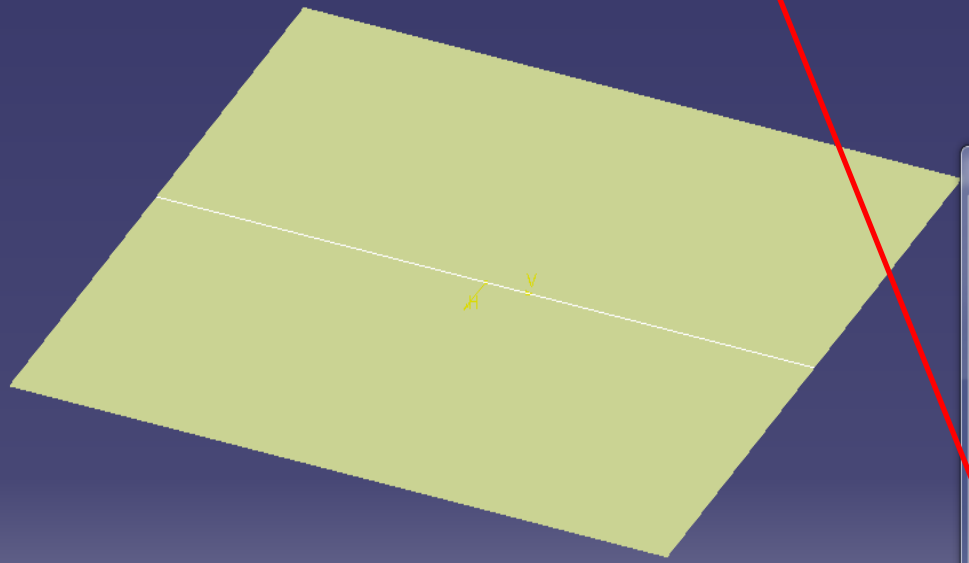
Offset 25mm

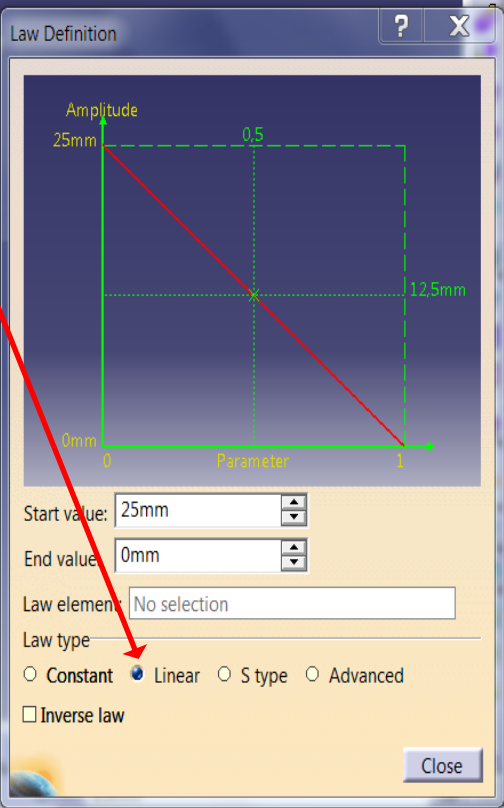
13:20
05/10/2014

CATIA V5 - [zapato_2.CATPart]

Start ENOVIA V5 VPM File Edit View Insert Tools Window Help

Si elegimos la representación lineal standard





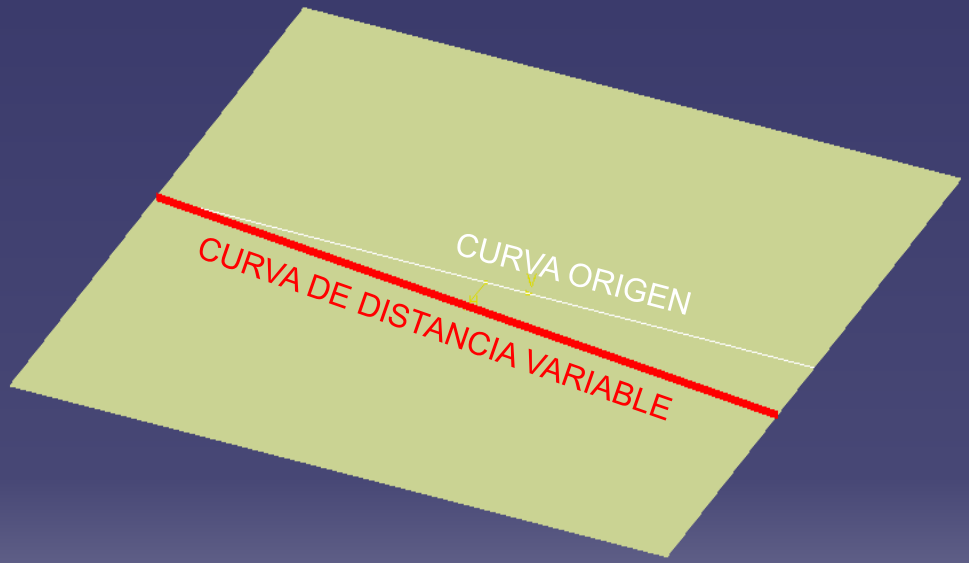
Select a user-defined law, specify the parameters defining a basic law or select a passing point

13:21
05/10/2014

CATIA V5 - [zapato_2.CATPart]

Start ENOVIA V5 VPM File Edit View Insert Tools Window Help

tenemos



PartBody

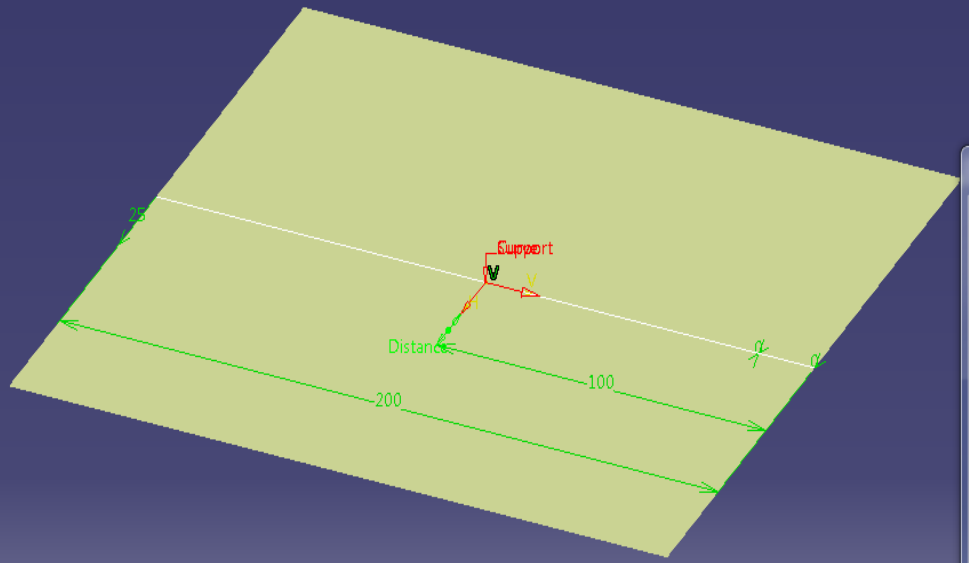
Select an object or a command

13:23
05/10/2014

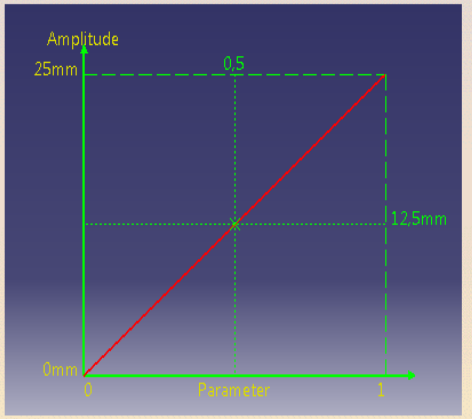
CATIA V5 - [zapato_2.CATPart]

Start ENOVIA V5 VPM File Edit View Insert Tools Window Help

pero si seleccionamos



Law Definition



Start value: 25mm

End value: 0mm

Law element: No selection

Law type

Constant Linear S type Advanced

Inverse law

Close

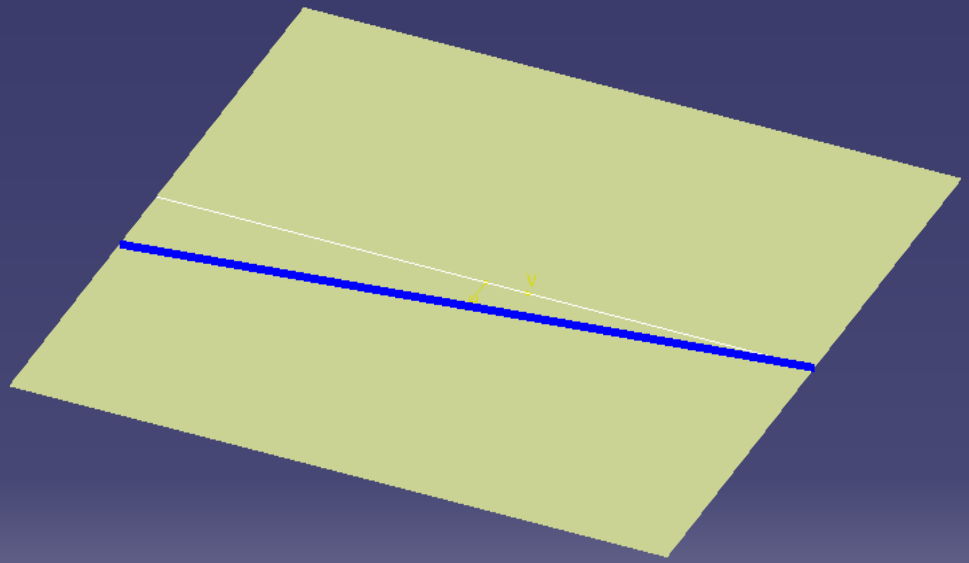
Select a user-defined law, specify the parameters defining a basic law or select a passing point

13:24
05/10/2014

CATIA V5 - [9.5.5_05 CURVAS PARALELAS_5.CATPart]

Start ENOVIA V5 VPM File Edit View Insert Tools Window Help

la inversa



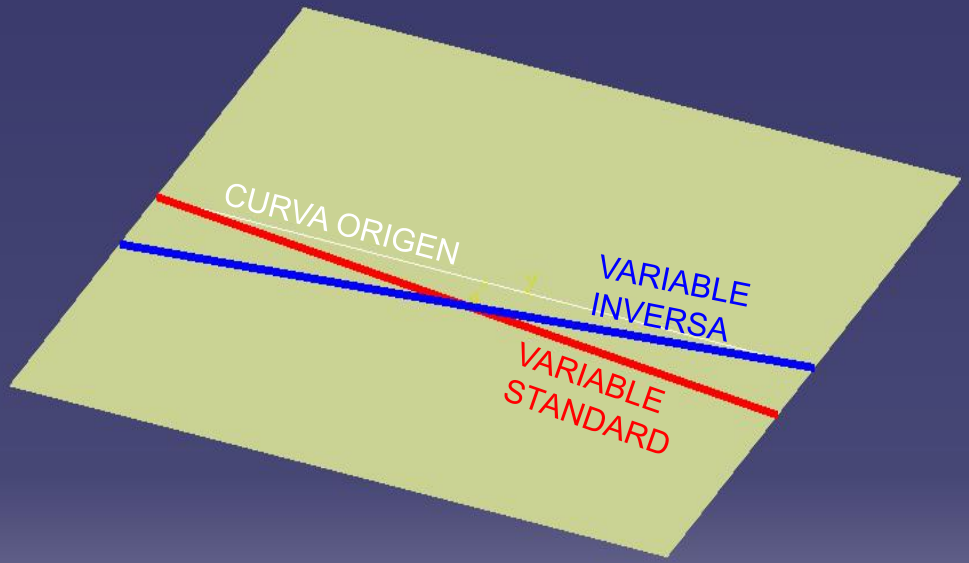
Select an object or a command

18:25
05/10/2014

CATIA V5 - [9.5.5_05 CURVAS PARALELAS_5.CATPart]

Start ENOVIA V5 VPM File Edit View Insert Tools Window Help

superponiendo ambas curvas



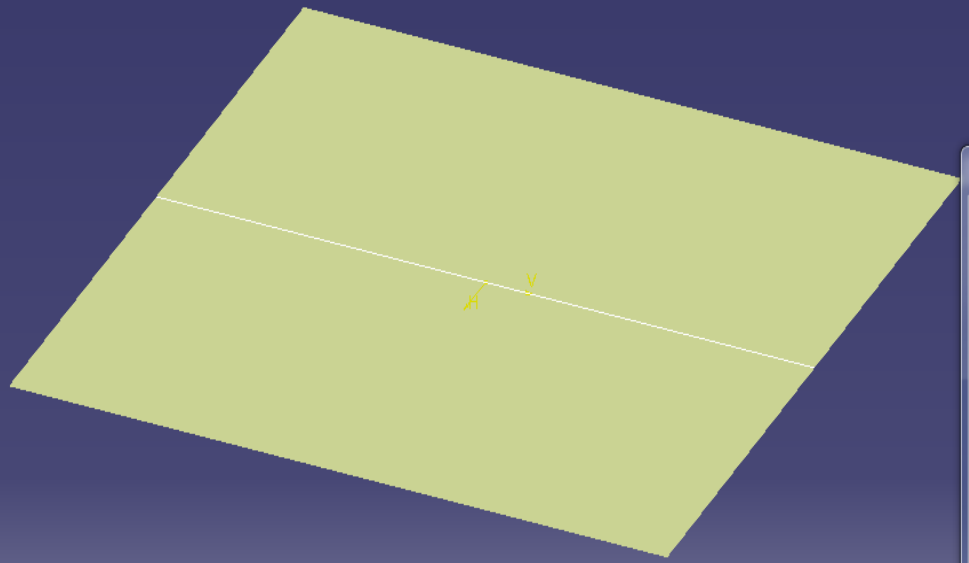
Select an object or a command

18:25
05/10/2014

CATIA V5 - [9.5.5_06 CURVAS PARALELAS_6.CATPart]

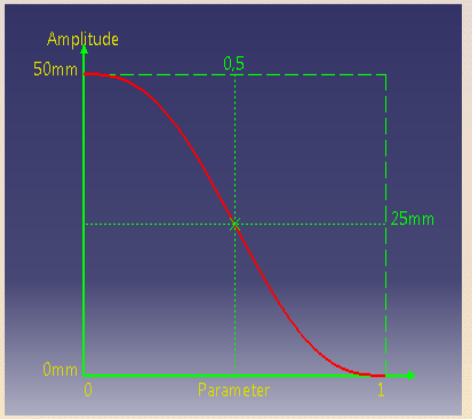
Start ENOVIA V5 VPM File Edit View Insert Tools Window Help

También podemos elegir





Law Definition



Start value: 50mm

End value: 0mm

Law element: No selection

Law type

Constant Linear S type Advanced

Inverse law

Close

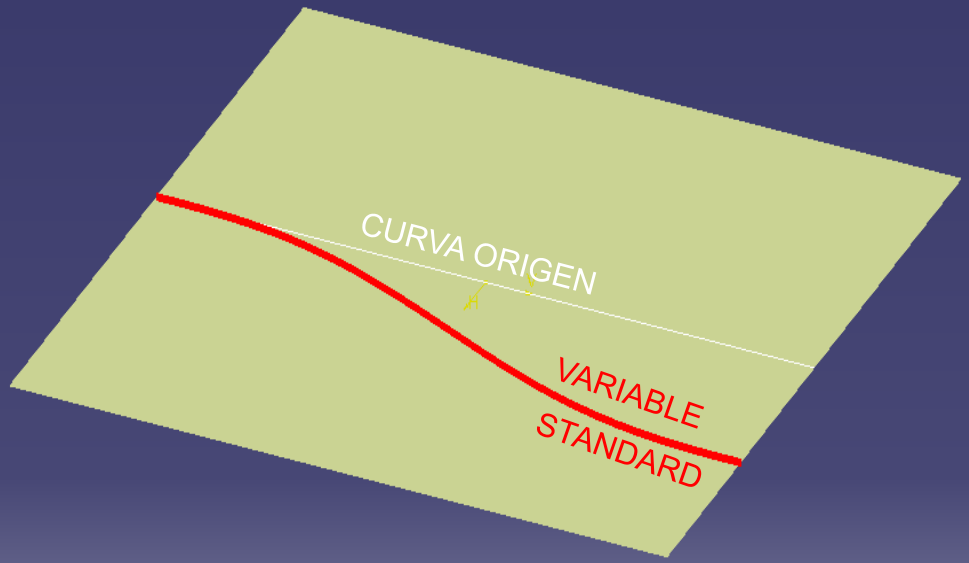
Select a user-defined law, specify the parameters defining a basic law or select a passing point

12:50
06/10/2014

CATIA V5 - [9.5.5_06 CURVAS PARALELAS_6.CATPart]

Start ENOVIA V5 VPM File Edit View Insert Tools Window Help

este tipo de curva standard



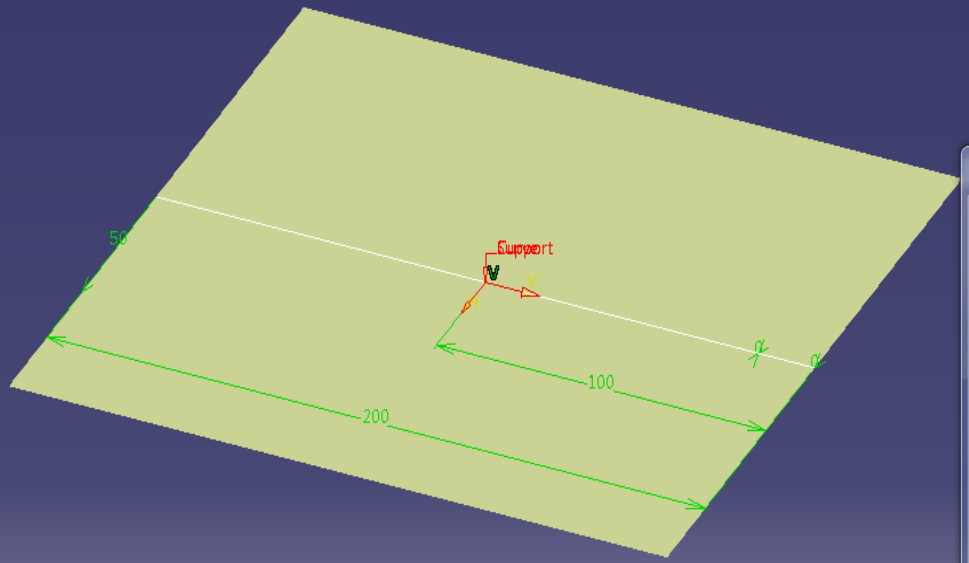
PartBody

Select an object or a command

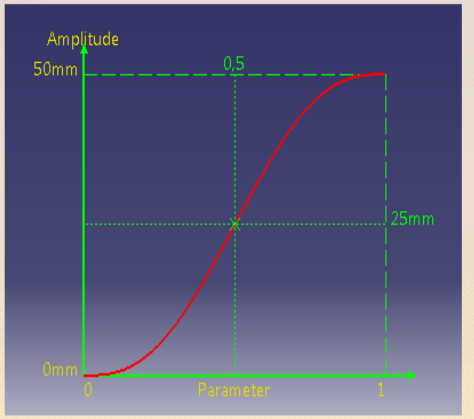
12:52
06/10/2014

CATIA V5 - [9.5.5_06 CURVAS PARALELAS_6.CATPart]

Start | ENOVIA V5 VPM | File | Edit | View | Insert | Tools | Window | Help



Law Definition



Start value: 50mm

End value: 0mm

Law element: No selection

Law type

Constant | Linear | S type | Advanced

Inverse law

Close

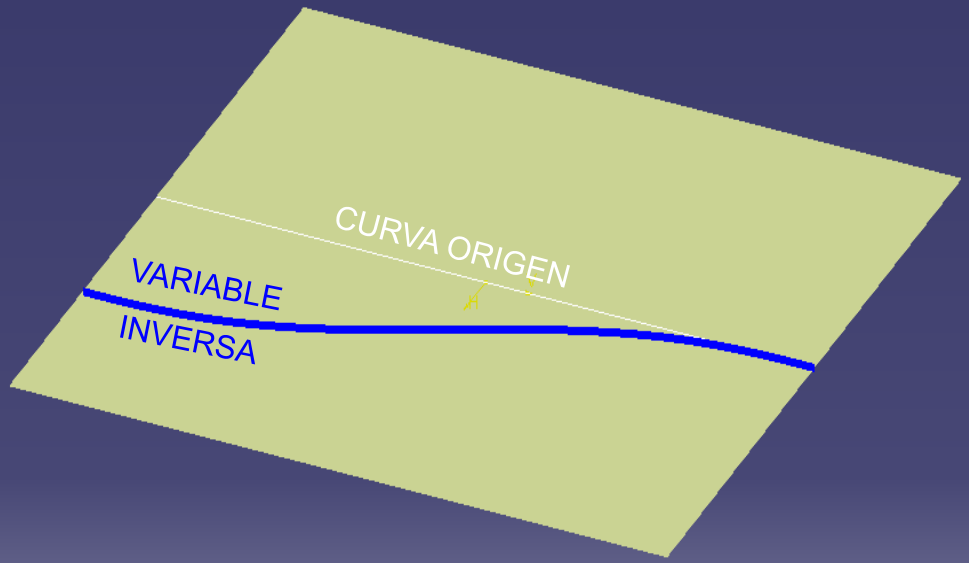
Select a user-defined law, specify the parameters defining a basic law or select a passing point

12:56
06/10/2014

CATIA V5 - [9.5.5_06 CURVAS PARALELAS_6.CATPart]

Start ENOVIA V5 VPM File Edit View Insert Tools Window Help

su inversa



PartBody

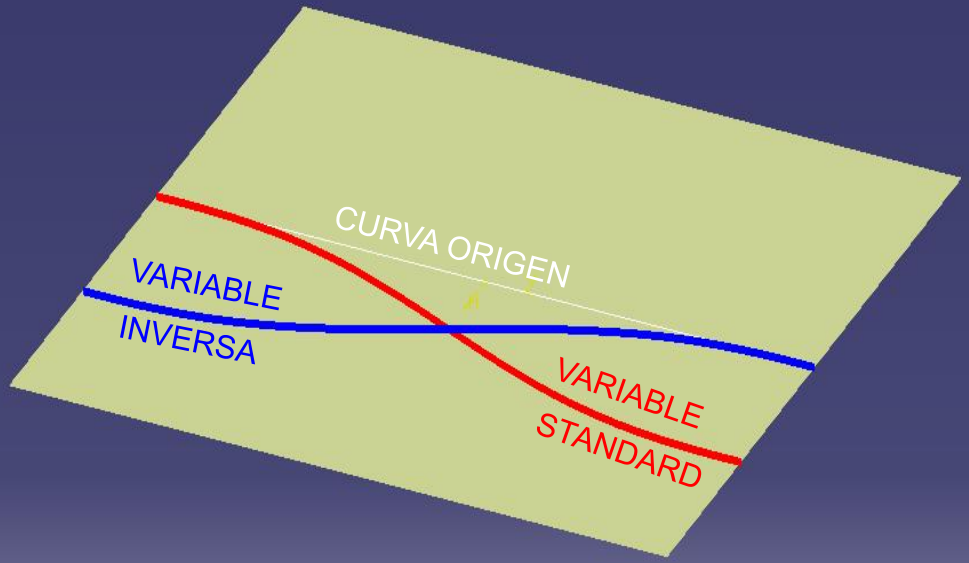
Select an object or a command

12:53
06/10/2014

CATIA V5 - [9.5.5_06 CURVAS PARALELAS_6.CATPart]

Start ENOVIA V5 VPM File Edit View Insert Tools Window Help

superponiendo ambas curvas



PartBody

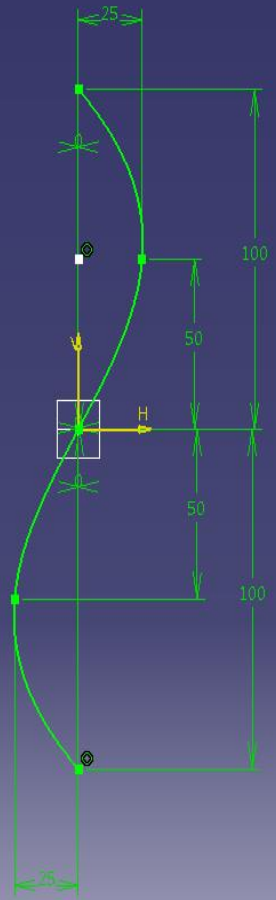
Select an object or a command

12:57
06/10/2014

CATIA V5 - [9.5.5_07 CURVAS PARALELAS_7.CATPart]

Start ENOVIA V5 VPM File Edit View Insert Tools Window Help

Part1
- xy plane
- yz plane
- zx plane
- PartBody



Ni las superficies tienen porque ser planas, ni las líneas rectas. De manera que si abrimos un Sketch sobre el plano XY, salimos y

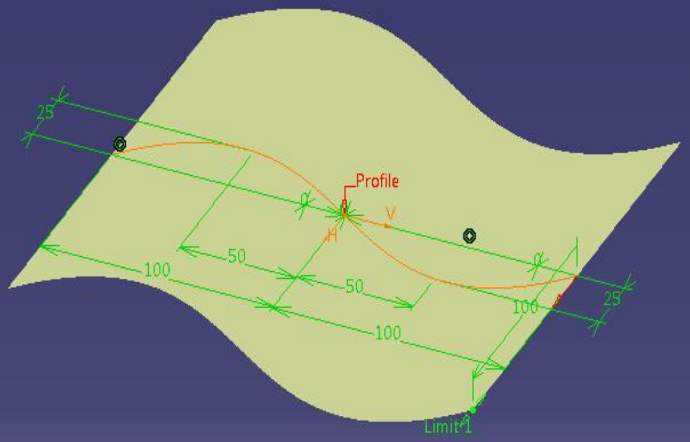
Select an object or a command

13:37
06/10/2014

CATIA V5 - [9.5.5_07 CURVAS PARALELAS_7.CATPart]

Start ENOVIA V5 VPM File Edit View Insert Tools Window Help

extruimos a 200 mm.



Extruded Surface Definition

Profile: Sketch.1

Direction: X Component

Extrusion Limits

Limit 1

Type: Dimension

Dimension: 100mm

Limit 2

Type: Dimension

Dimension: 100mm

Mirrored Extent

Reverse Direction

OK Cancel Preview

PartBody

Select the profile to be extruded

Limit 1 Dimension 100mm

13:40
06/10/2014

CATIA V5 - [9.5.5_07 CURVAS PARALELAS_7.CATPart]

Start ENOVIA V5 VPM File Edit View Insert Tools Window Help

nos queda este plano soporte



PartBody

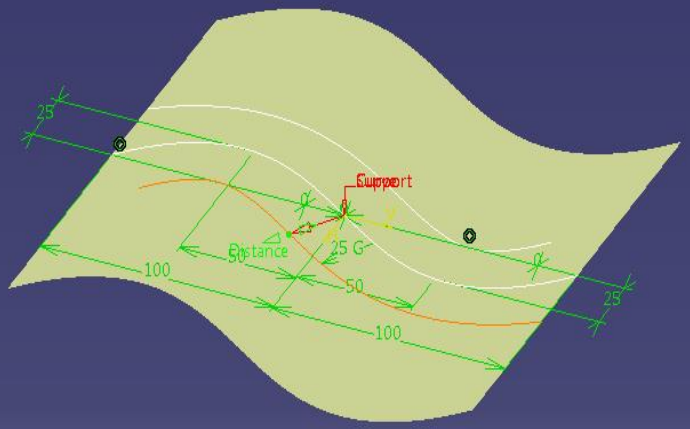
Select an object or a command

13:40
06/10/2014

CATIA V5 - [9.5.5_07 CURVAS PARALELAS_7.CATPart]

Start ENOVIA V5 VPM File Edit View Insert Tools Window Help

en el que podemos



Parallel Curve Definition

Curve: Sketch.1

Support: Extrude.1

Constant: 25mm Law...

Point: No selection

Parameters

Parallel mode: Geodesic

Parallel corner type: Sharp

Smoothing

None Tangency Curvature

Reverse Direction

Both Sides

Repeat object after OK

OK Cancel Preview

PartBody

Select a user-defined law, specify the parameters defining a basic law or select a passing point

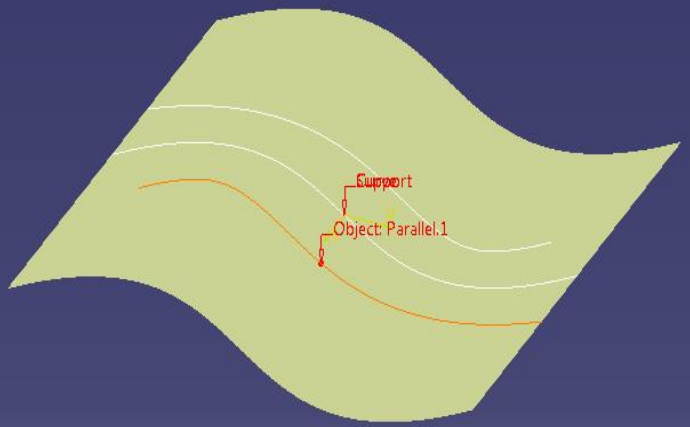
Offset 25mm

16:00
06/10/2014

CATIA V5 - [9.5.5_07 CURVAS PARALELAS_7.CATPart]

Start ENOVIA V5 VPM File Edit View Insert Tools Window Help

a una curva de origen dada



Running Commands

Parallel.1 Object Repetition

Object Repetition

Instance(s): 1

Mode for Repetition

Absolute Relative

Create in a new Body

OK Cancel

PartBody

Select the object to repeat

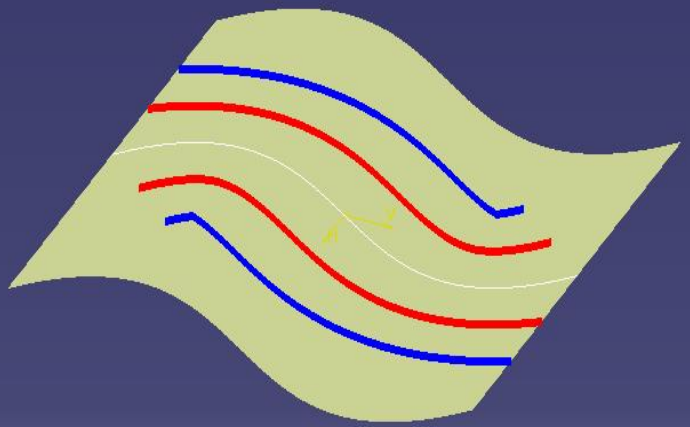
Spinner 1

16:04
06/10/2014

CATIA V5 - [9.5.5_07 CURVAS PARALELAS_7.CATPart]

Start ENOVIA V5 VPM File Edit View Insert Tools Window Help

trazarle líneas paralelas



Ordered Geometrical Set.1

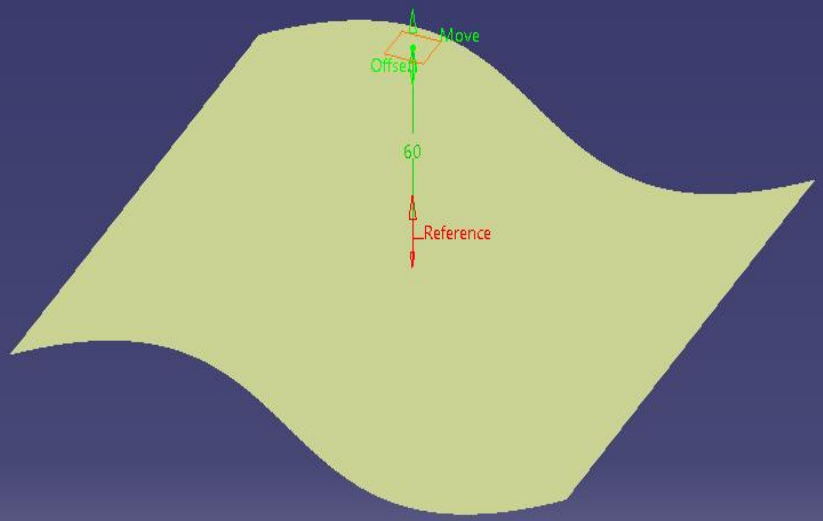
Select an object or a command

16:06
06/10/2014

CATIA V5 - [9.5.5_08 CURVAS PARALELAS_8.CATPart]

Start ENOVIA V5 VPM File Edit View Insert Tools Window Help

Las curvas de origen no tienen porqué estar contenidas en el plano soporte, pueden estar fuera de él, p. e. en un plano paralelo al XY 60 mm.



Plane Definition

Plane type: Offset from plane

Reference: xy plane

Offset: 60mm

Reverse Direction

Repeat object after OK

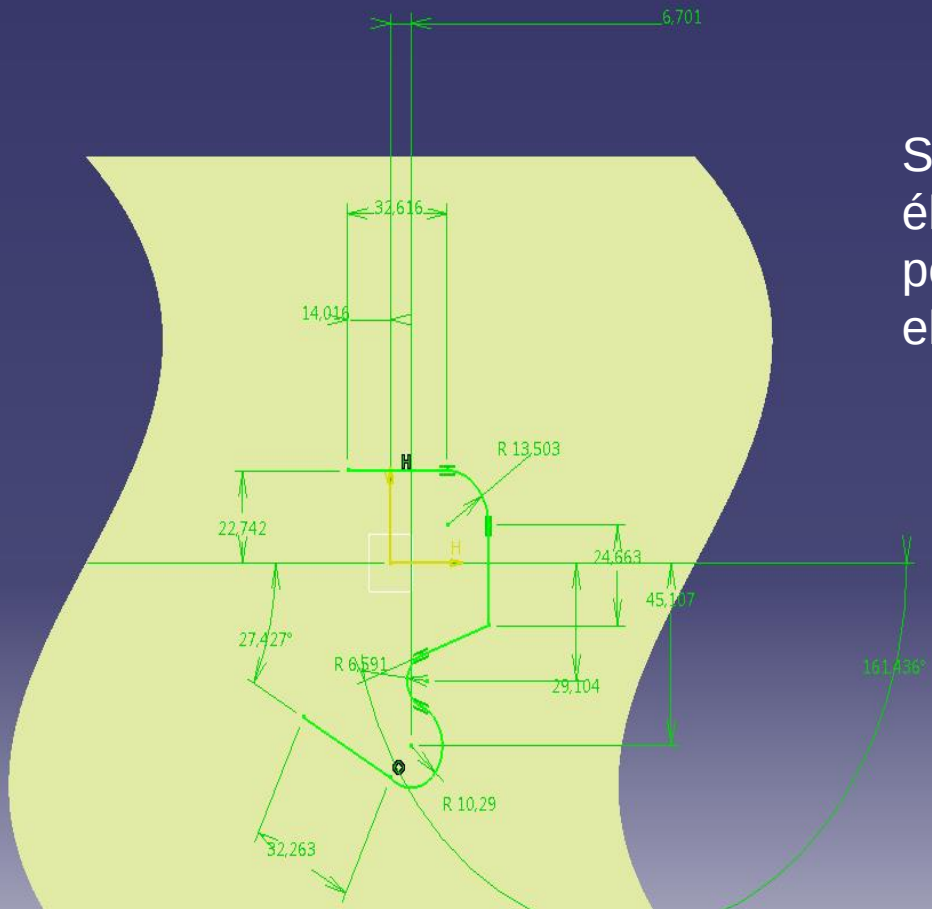
OK Cancel Preview

PartBody

Press OK when completed

Offset 60mm

17:50
07/10/2014

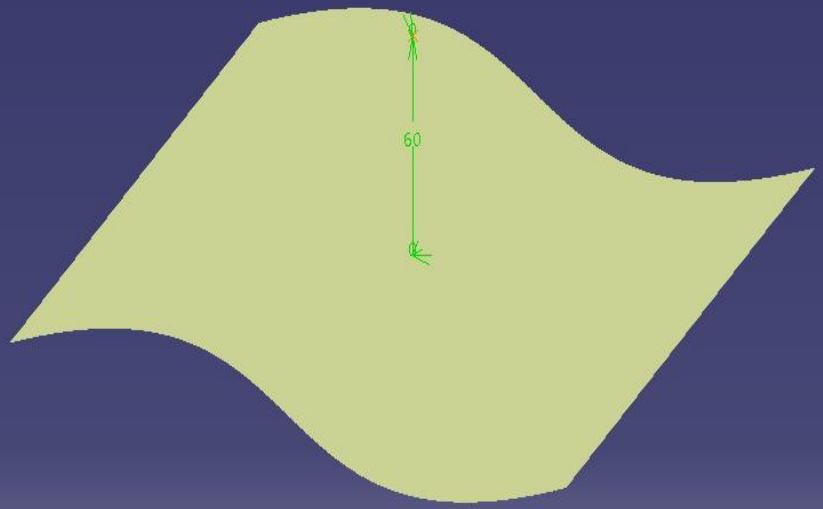


Si abrimos un sketch sobre él y dibujamos una curva, podremos proyectarla sobre el plano soporte.

CATIA V5 - [9.5.5_08 CURVAS PARALELAS_8.CATPart]

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Vamos a trazar una recta que pase por este punto



Running Commands

Line.1 Point.1

Point Definition

Point type: Coordinates

X = 0mm

Y = 0mm

Z = 60mm

Reference

Point: Default (Origin)

Axis System: Default (Absolute)

Compass Location

OK Cancel Preview

PartBody

Enter point coordinates or select a reference point, a curve or a surface

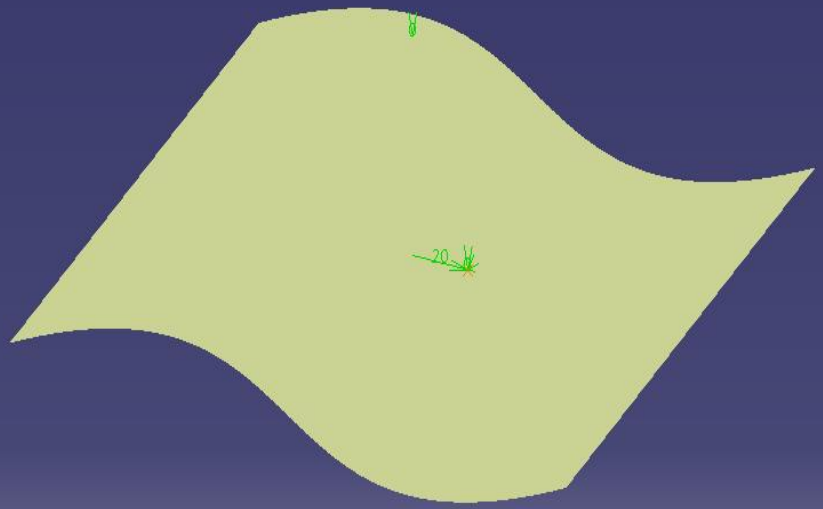
X;Y;Z 0mm;0mm;60mm

18:04
07/10/2014

CATIA V5 - [9.5.5_08 CURVAS PARALELAS_8.CATPart]

Start ENOVIA V5 VPM File Edit View Insert Tools Window Help

y este



Running Commands

Line.1 Point.2

Point Definition

Point type: Coordinates

X = 0mm

Y = 20mm

Z = 0mm

Reference

Point: Default (Origin)

Axis System: Default (Absolute)

Compass Location

OK Cancel Preview

PartBody

Enter point coordinates or select a reference point, a curve or a surface

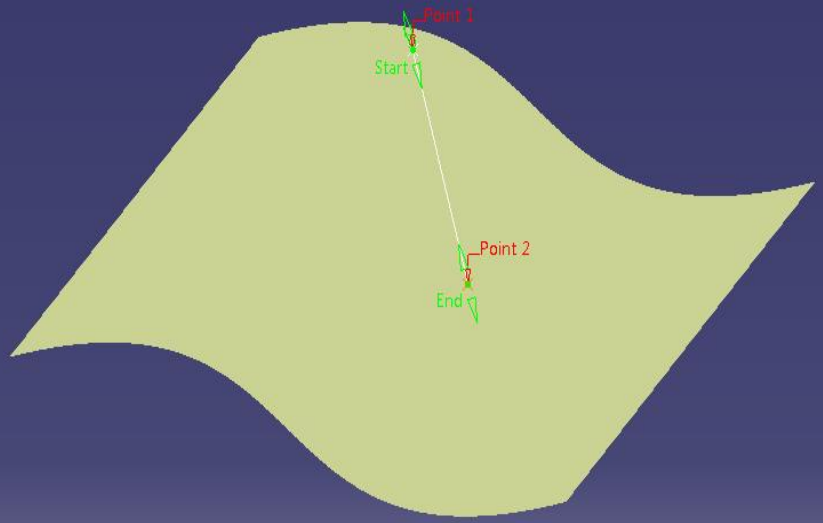
X;Y;Z 0mm;20mm;0mm

18:06
07/10/2014

CATIA V5 - [9.5.5_08 CURVAS PARALELAS_8.CATPart]

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Con lo que la recta resultante podremos emplearla



Line Definition

Line type : Point-Point

Point 1: Point.1

Point 2: Point.2

Support: Default (None)

Start: 0mm

Up-to 1: No selection

End: 0mm

Up-to 2: No selection

Length Type

Length Infinite Start Point

Infinite Infinite End Point

Mirrored extent

OK Cancel Preview

PartBody

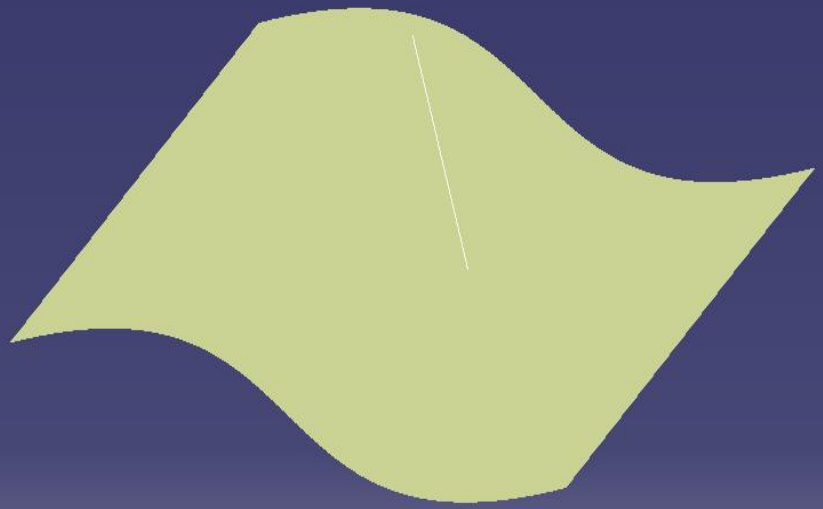
Select the second point or a direction

18:07
07/10/2014

CATIA V5 - [9.5.5_08 CURVAS PARALELAS_8.CATPart]

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como línea de dirección



PartBody

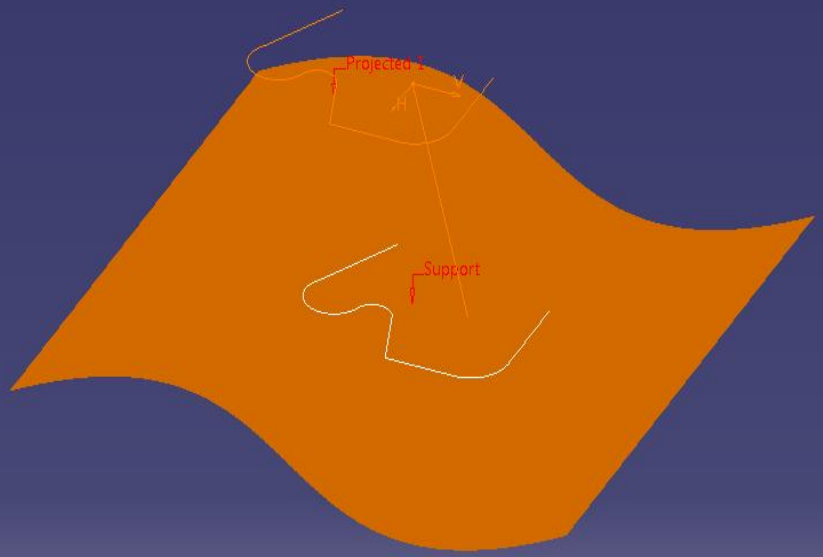
Select an object or a command

18:09
07/10/2014

CATIA V5 - [9.5.5_08 CURVAS PARALELAS_8.CATPart]

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de la proyección del sketch 2



Tools Palette

Projection Definition

Projection type : Along a direction

Projected: Sketch.2

Support: Extrude.1

Direction: Line.1

Nearest solution

Smoothing

None Tangency Curvature

OK Cancel Preview

PartBody

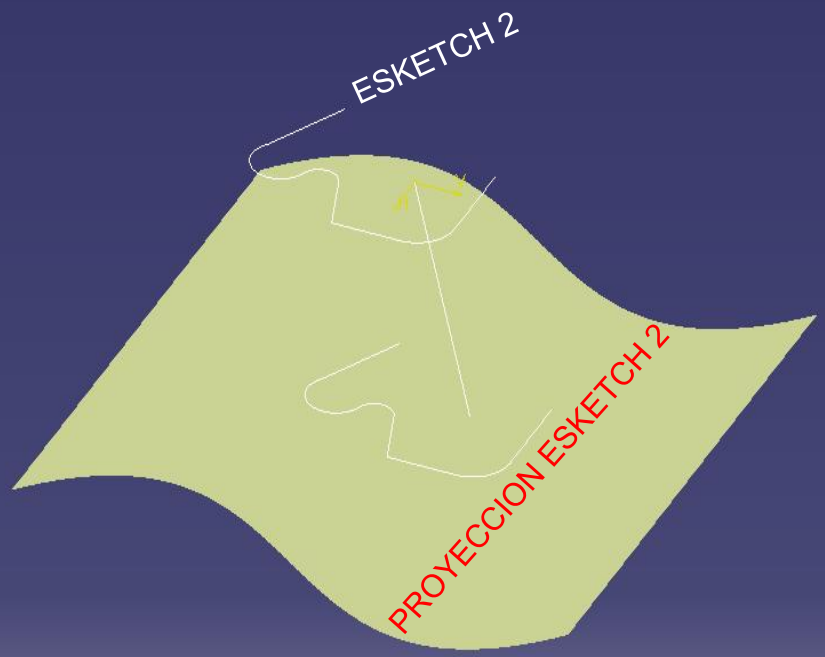
Select the point or curve to be projected

12:02
08/10/2014

CATIA V5 - [9.5.5_08 CURVAS PARALELAS_8.CATPart]

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sobre el plano soporte



Select an object or a command

12:04
08/10/2014

CATIA V5 - [9.5.5_08 CURVAS PARALELAS_8.CATPart]

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proyección a la que podemos sacar paralelas



Parallel Curve Definition

Curve: Project.1
Support: Default (Plane)
Constant: 15mm Law...
Point: No selection
Parameters
Parallel mode: Geodesic
Parallel corner type: Sharp
Smoothing
None Tangency Curvature
Reverse Direction
Both Sides
Repeat object after OK
OK Cancel Preview

PartBody

Select a support surface or plane

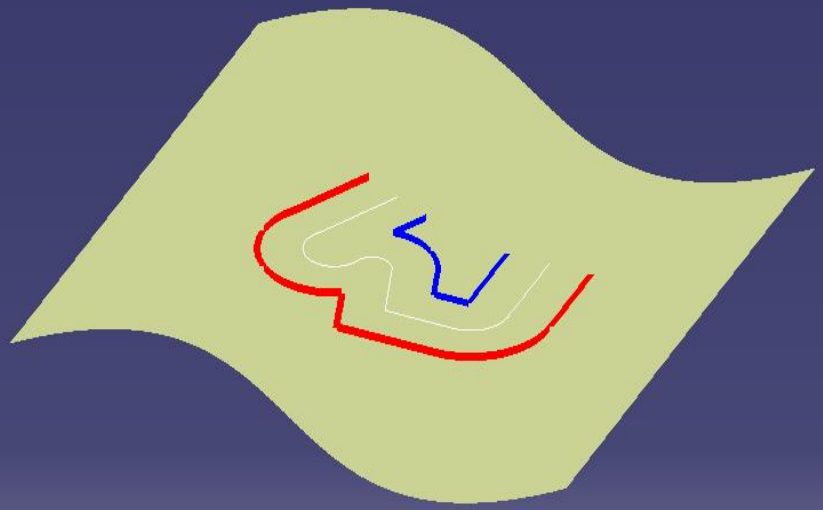
Offset 15mm

12:09
08/10/2014

CATIA V5 - [9.5.5_08 CURVAS PARALELAS_8.CATPart]

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con cualquiera de los métodos vistos anteriormente



PartBody

Select an object or a command

12:11
08/10/2014

F I N