

# Alibre Walk-Thru

Lee Morin

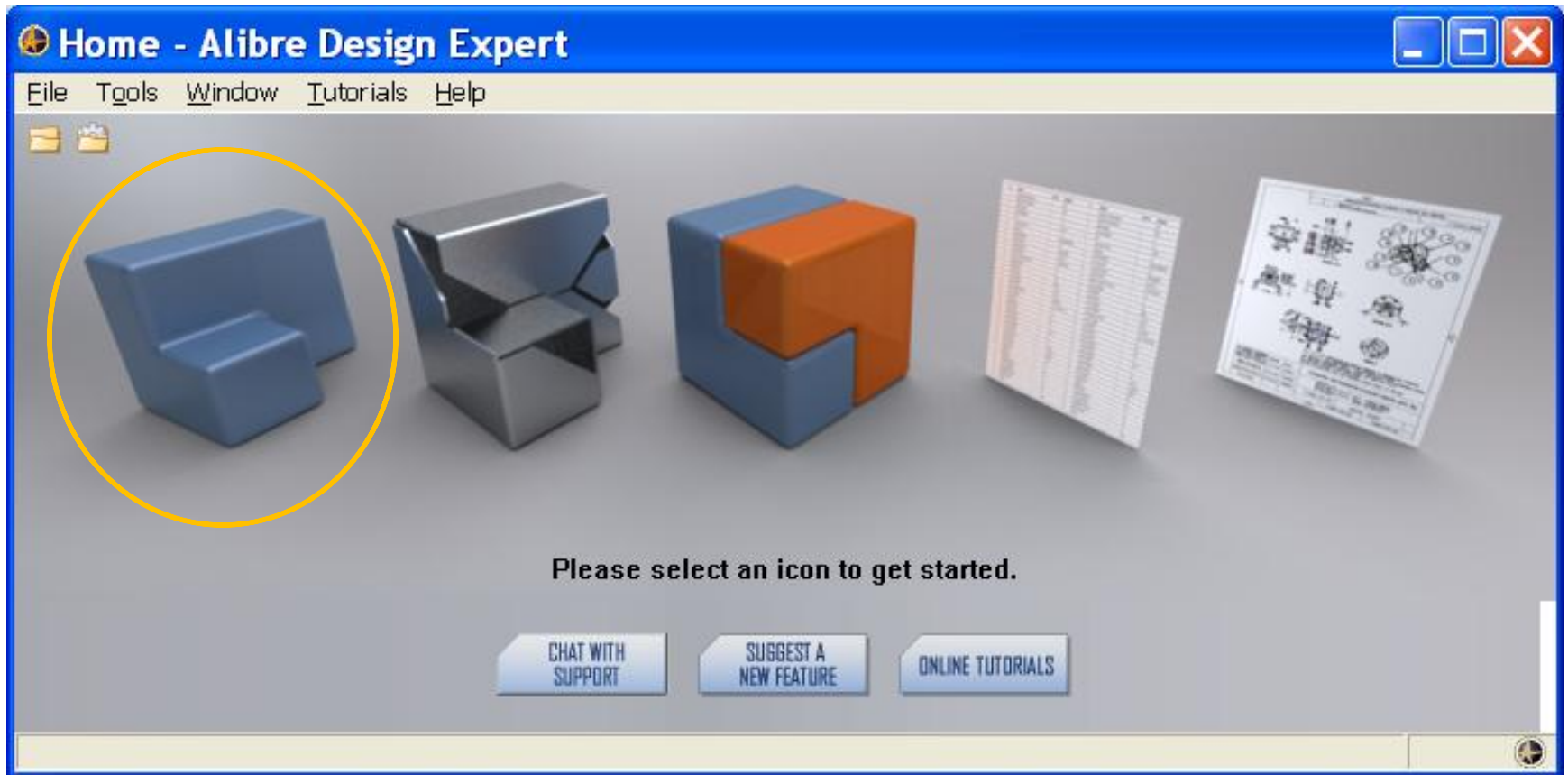
Houston Home Metal Shop Club

Feb 2010

# What is Alibre?

- Alibre is a Windows CAD package
  - Capable
  - Intermediate Cost (\$200 to \$1000)
  - Different Levels available
  - Has very interactive 3-D interface
- Free Alibre Express versions and Trials can be downloaded
- Lee has no financial or other relationship with the Alibre company (except as a customer)

# Opening Screen

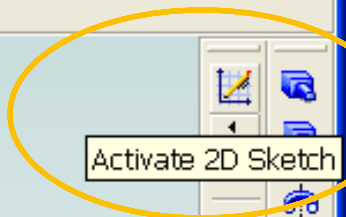
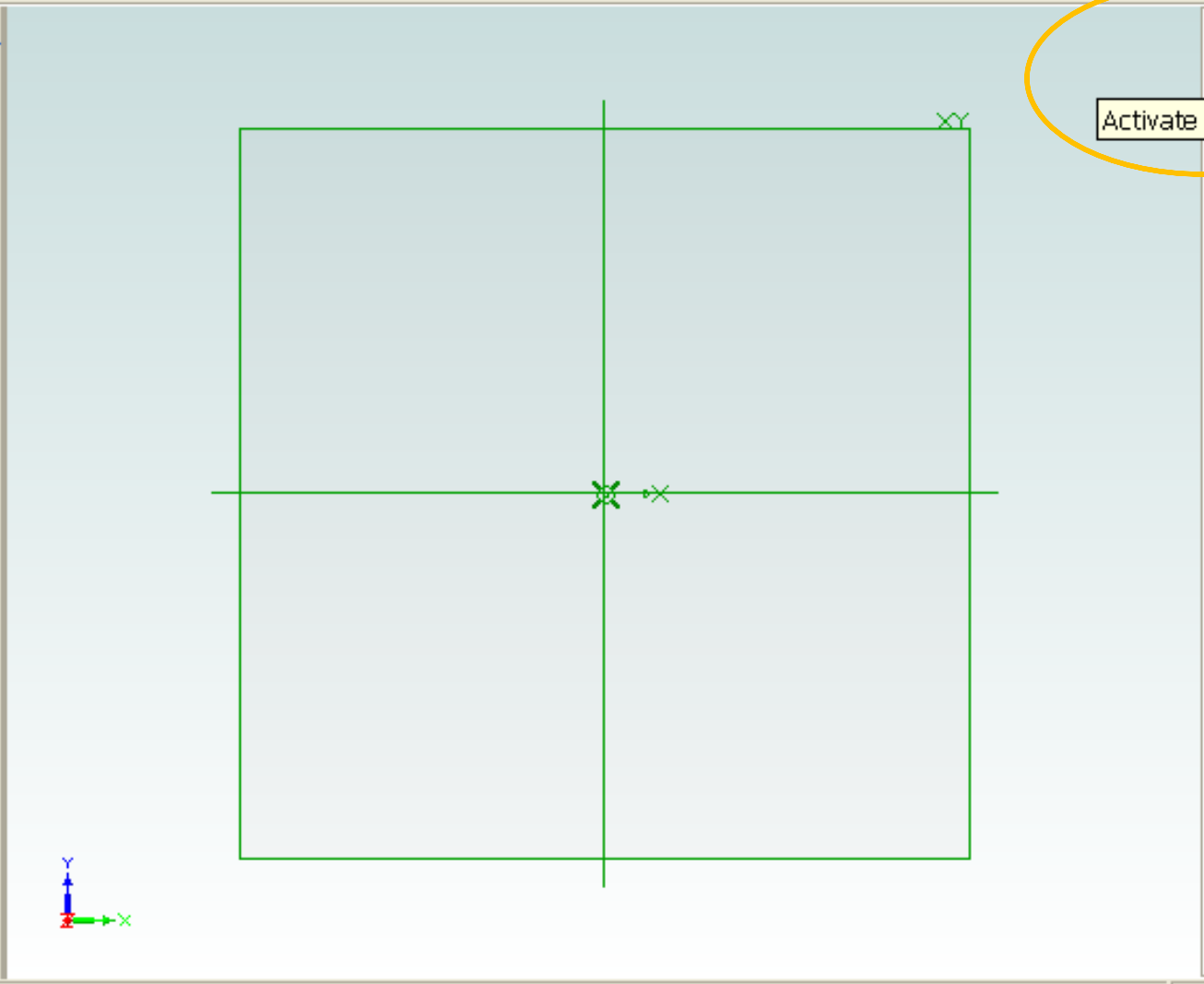


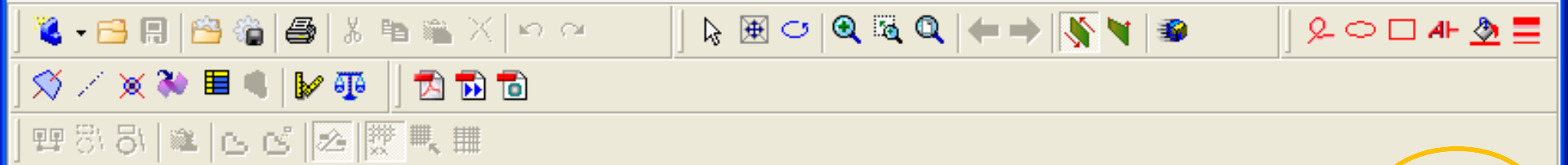




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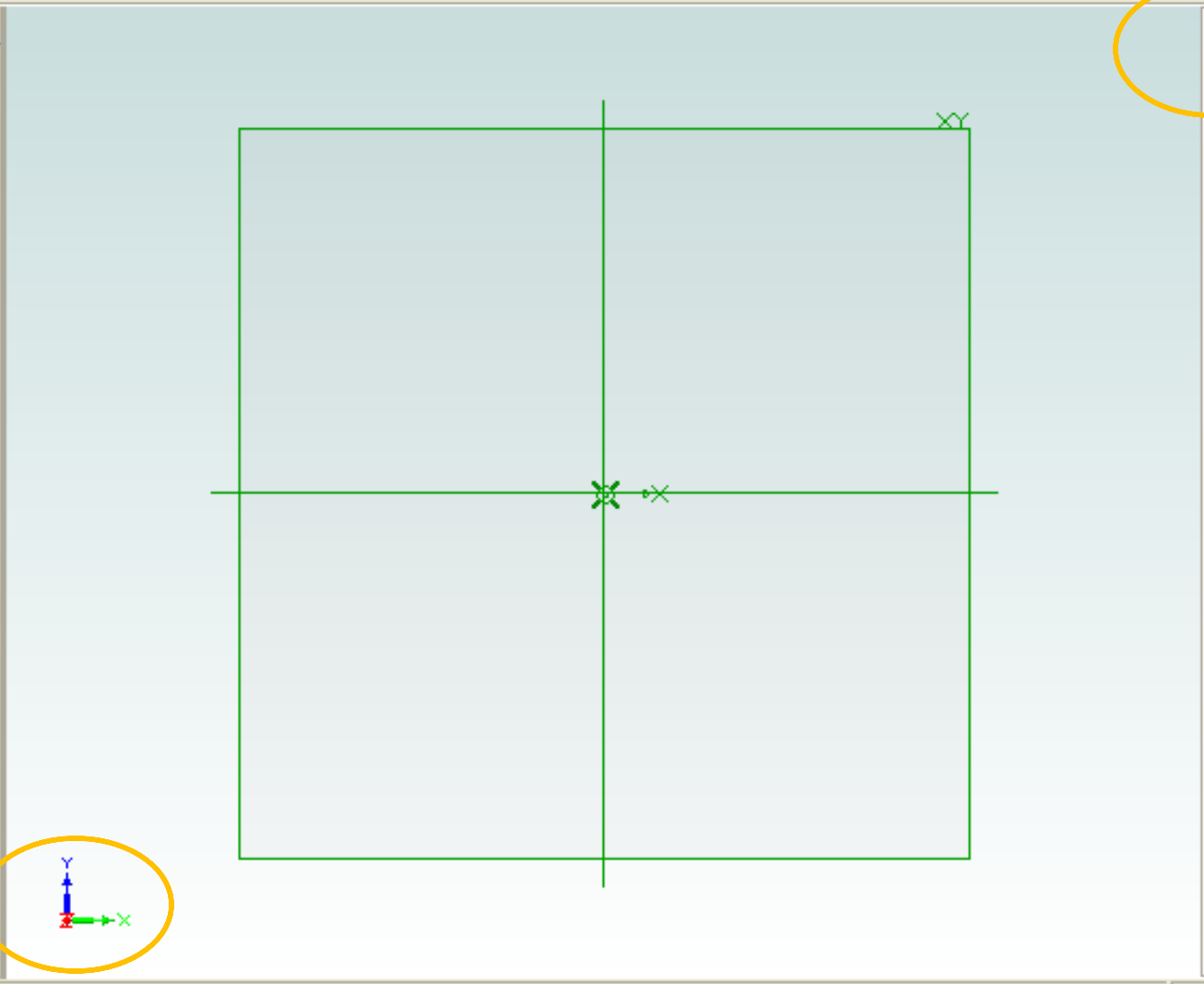
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  - Planes
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  - Edges
  - Faces
  - Vertices

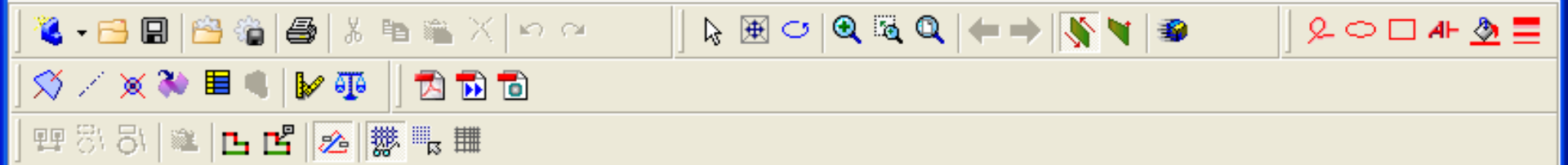




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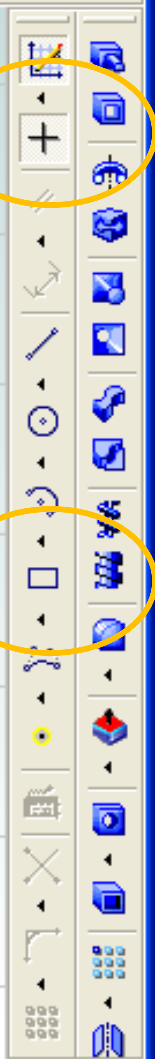
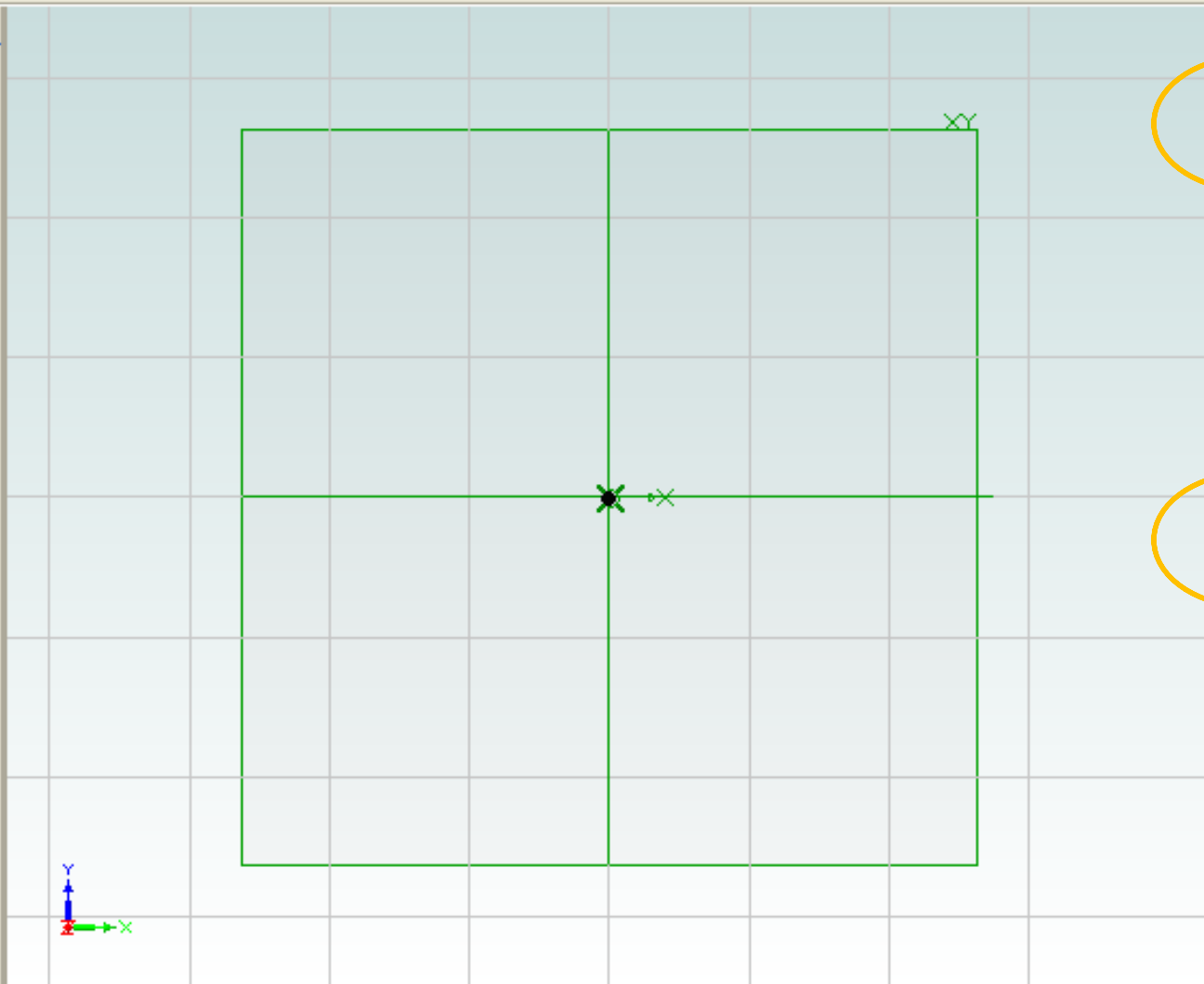
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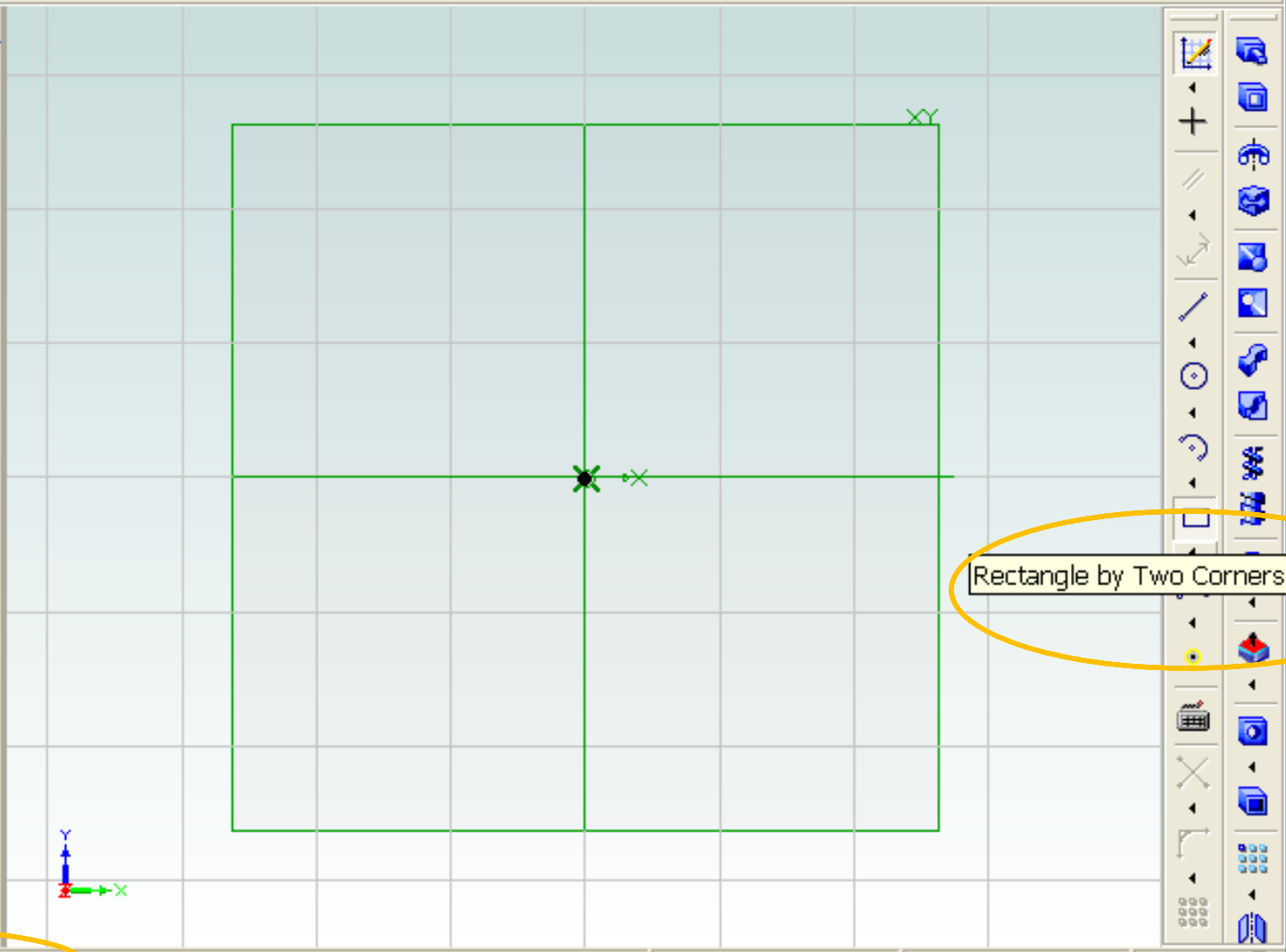
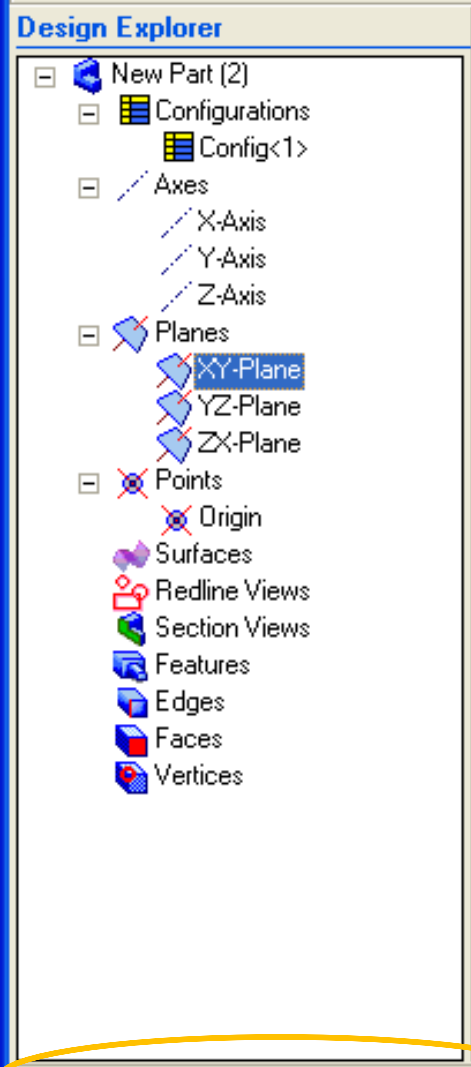




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# New Part (1) - Alibre Design Expert

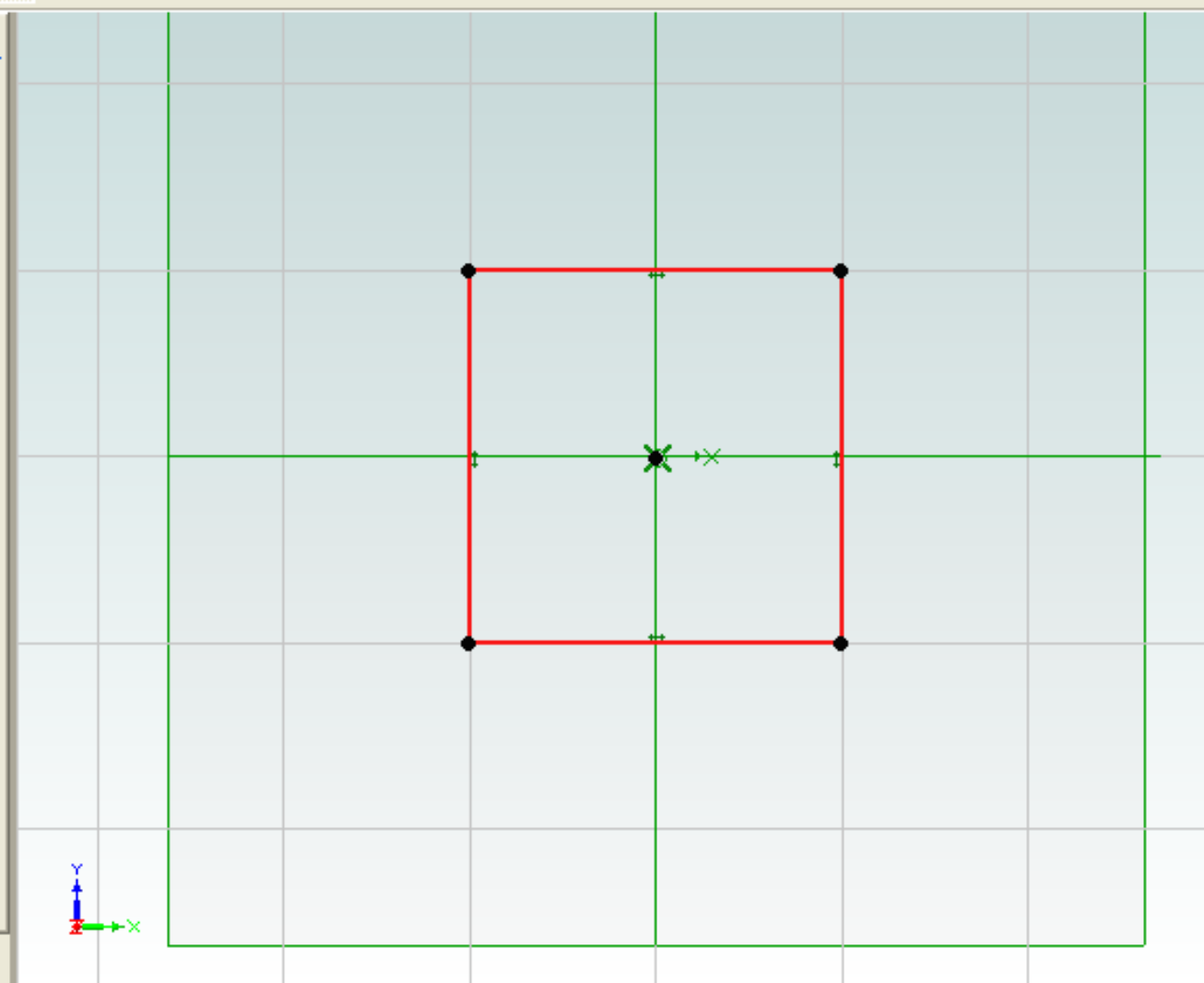


File Edit View Insert Sketch 3D Sketch Feature Tools Alibre CAM Window Help



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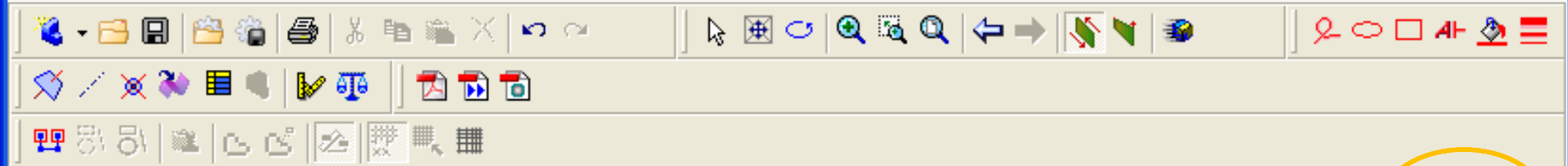
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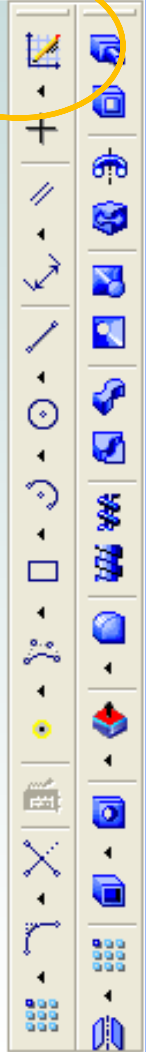
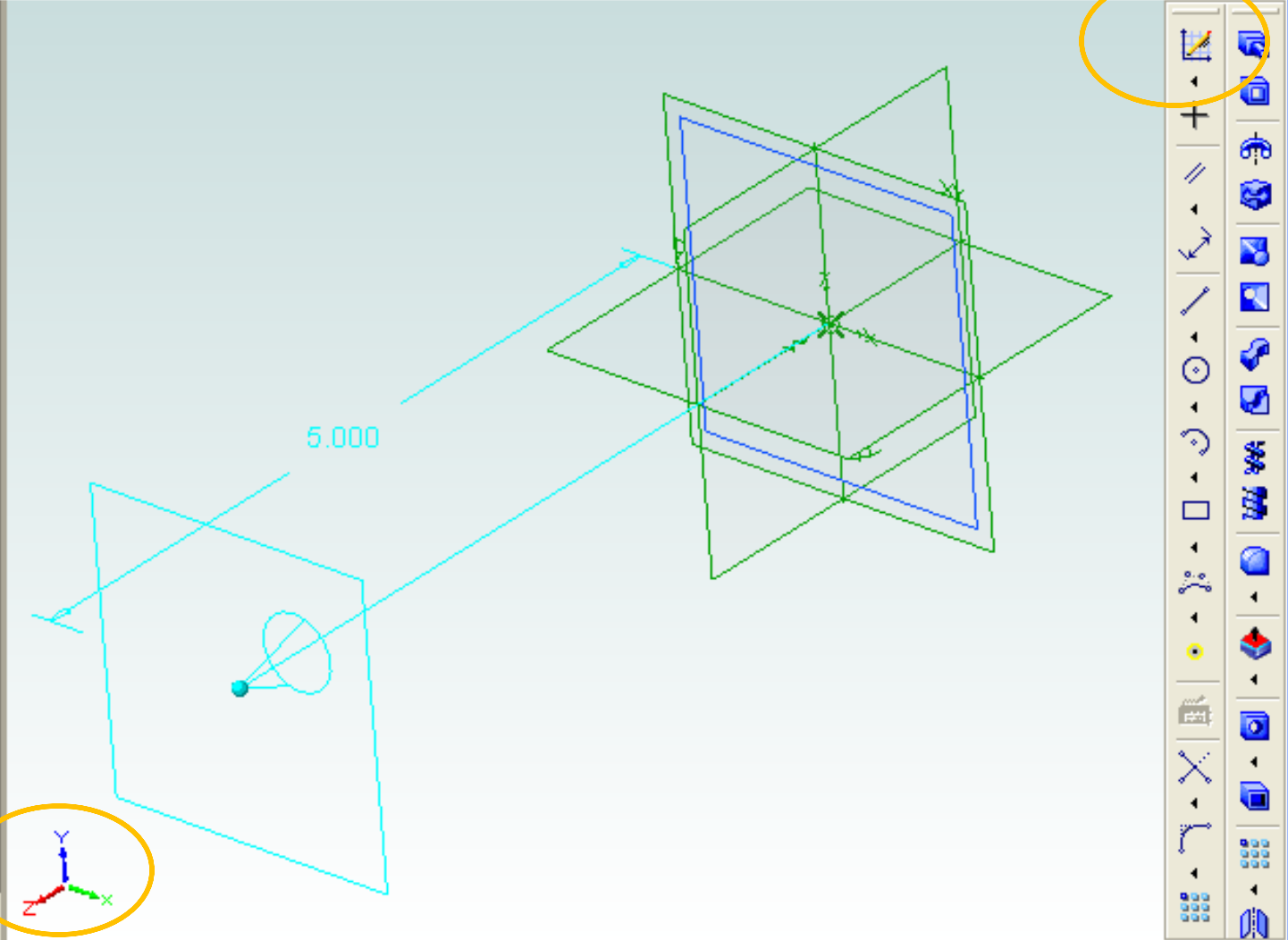


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Design Explorer Alibre CAM

# Extrude Boss



Sketch

Sketch<1>

Type:

To Depth

Direction

Along Normal

Select

Depth

1"

Reverse

Draft Angle

0

Outward

To Geometry

Target:

Offset:

.000"

Label:

Extrusion<1>

OK

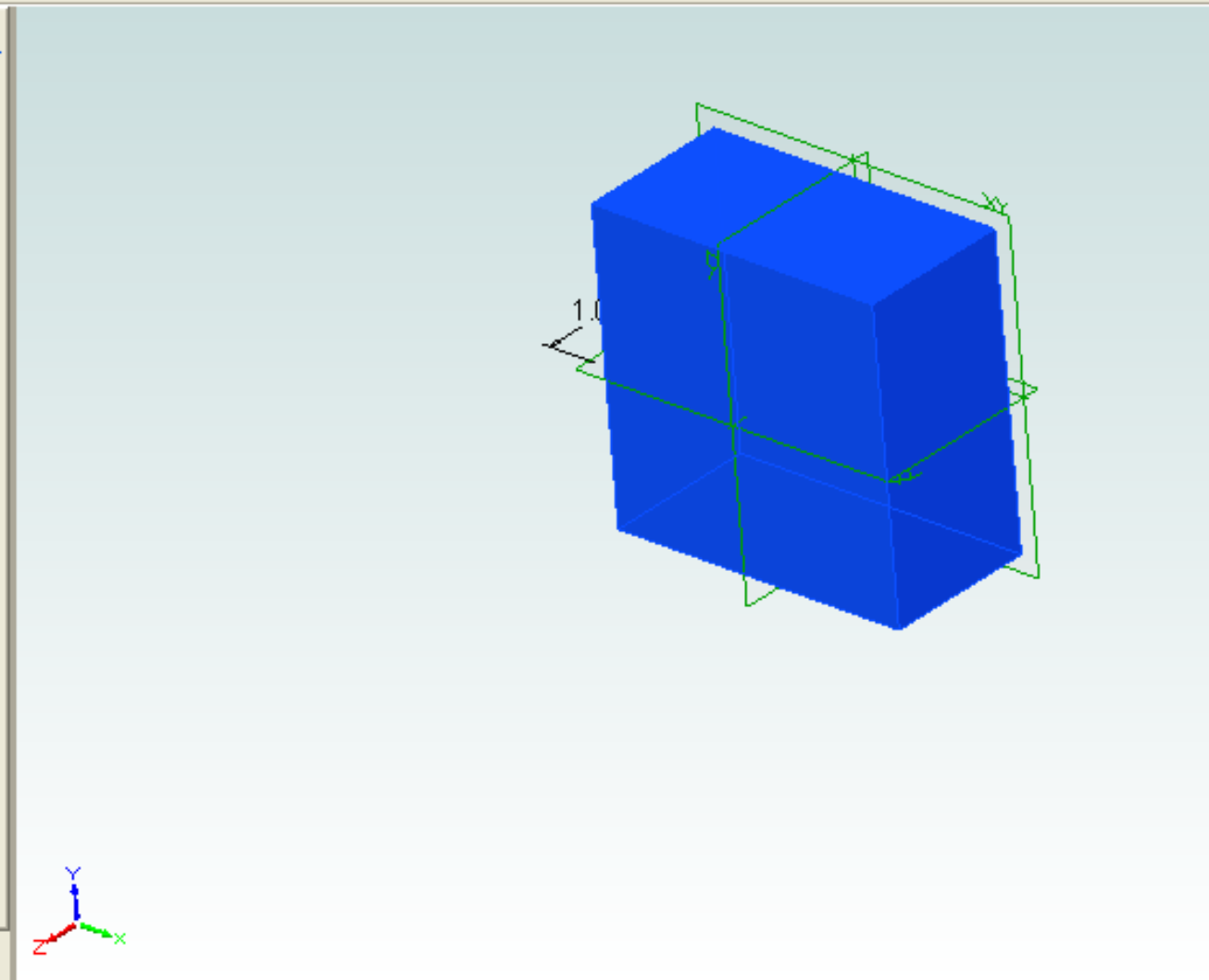
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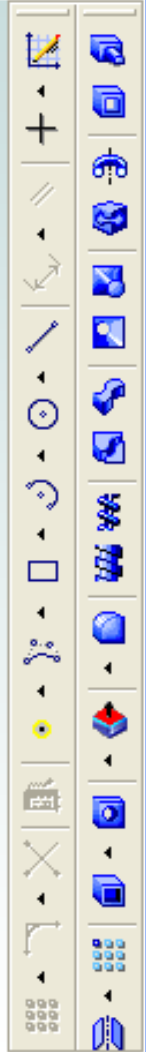
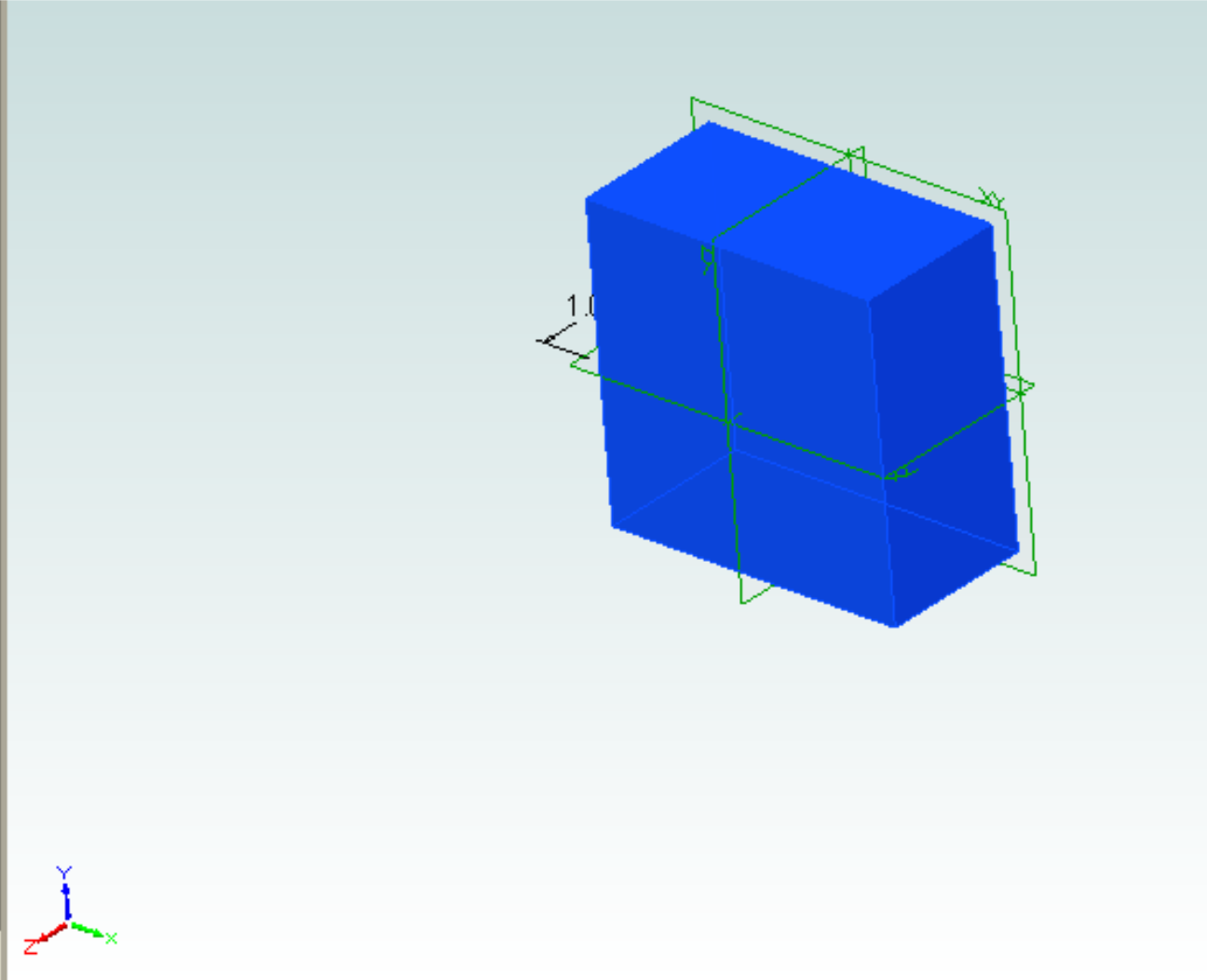


File Edit View Insert Sketch 3D Sketch Feature Tools Alibre CAM Window Help



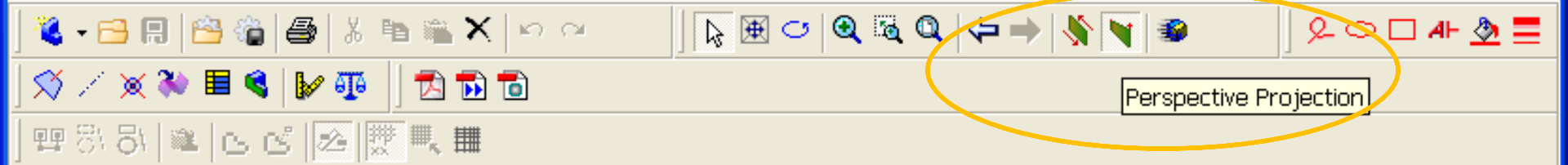
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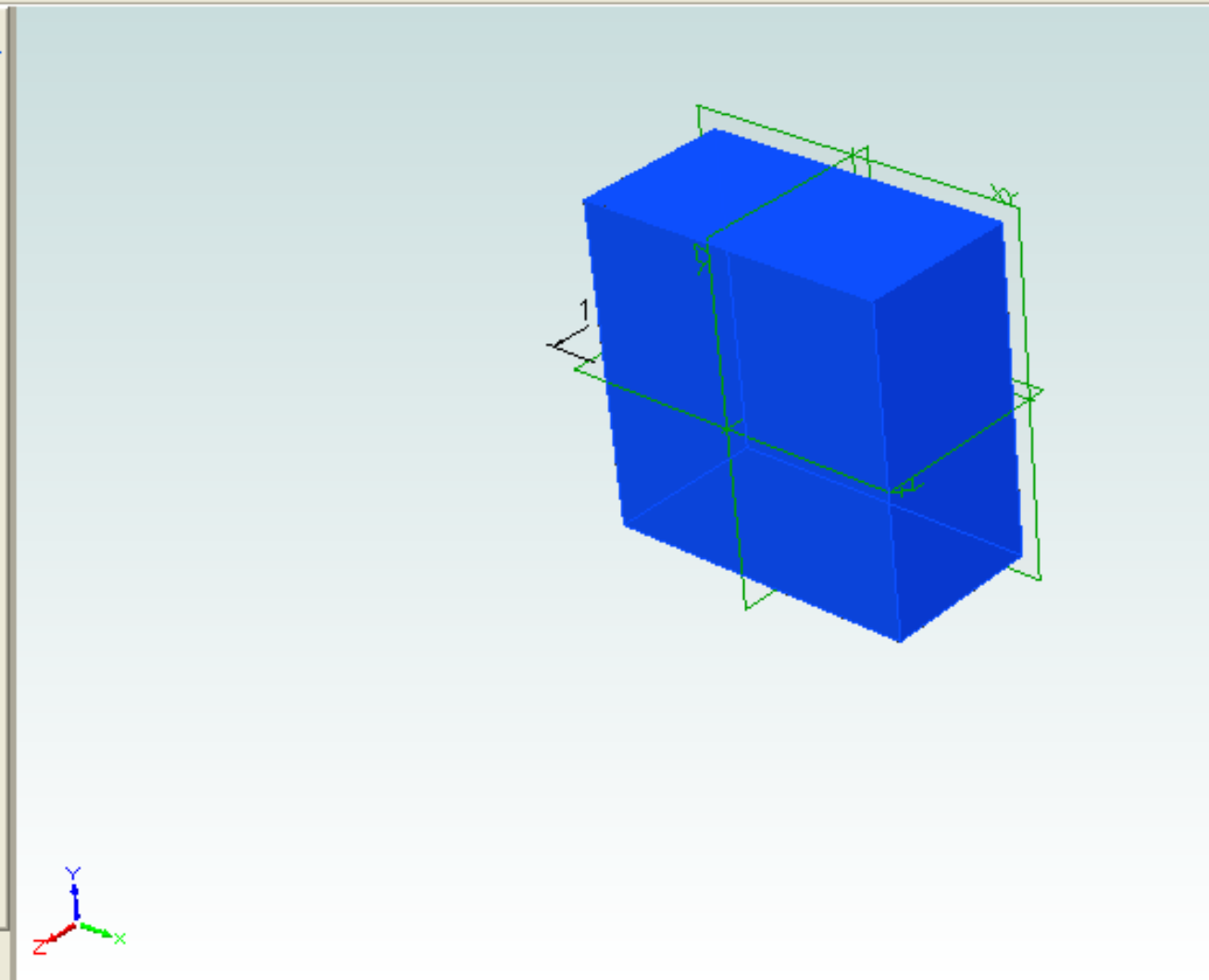
Design Explorer Alibre CAM

Sets orthographic (parallel) projection



**Design Explorer**

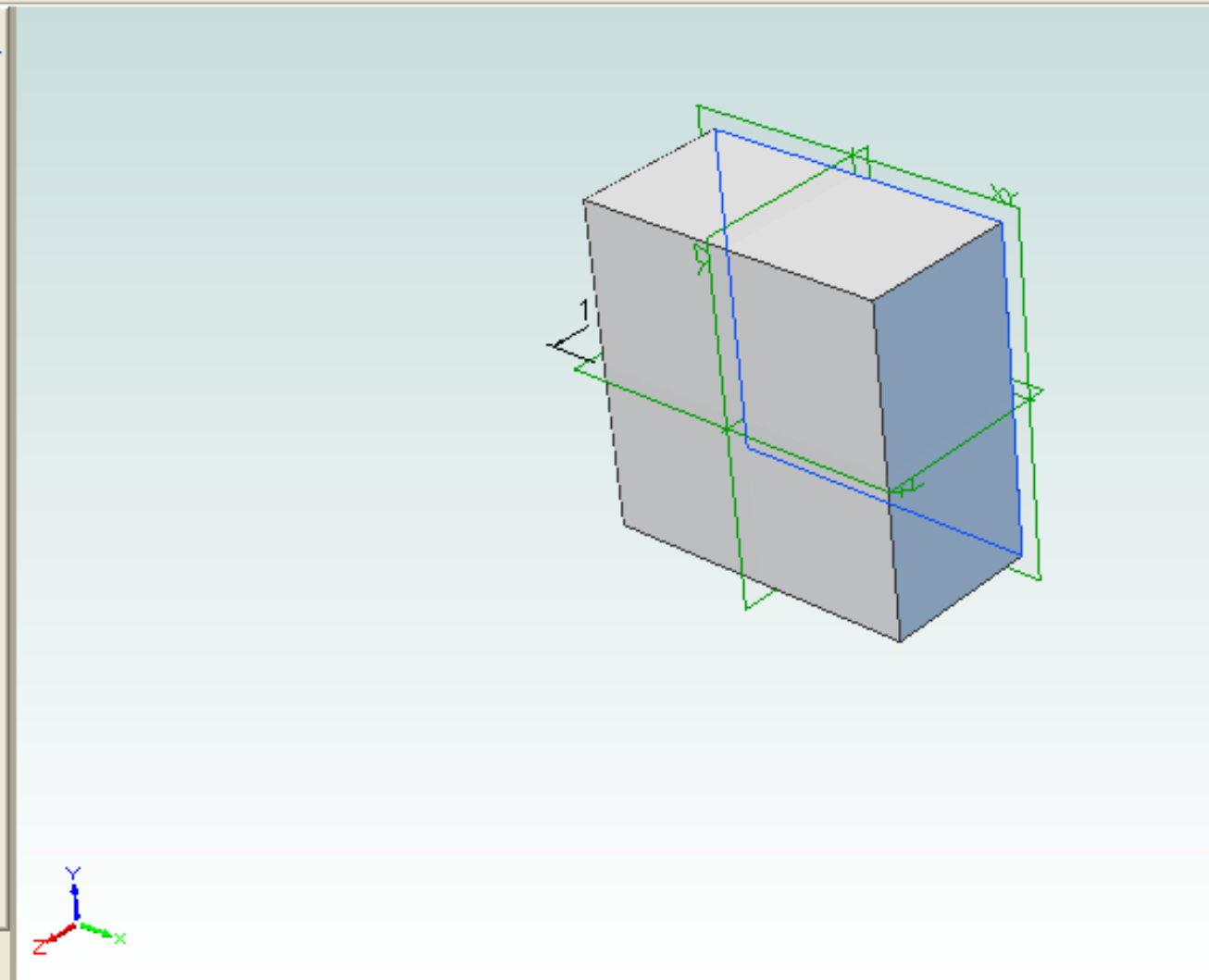
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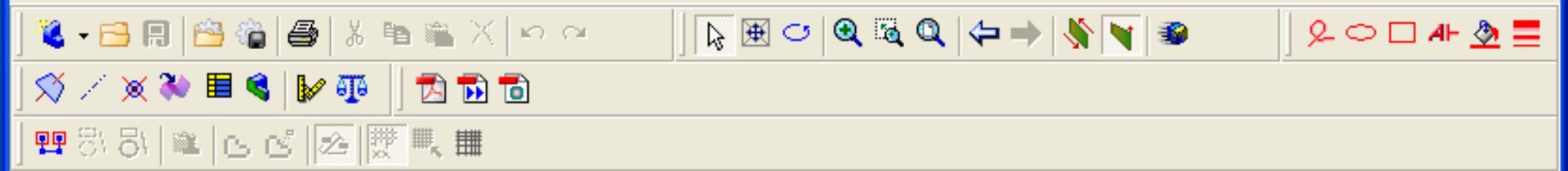




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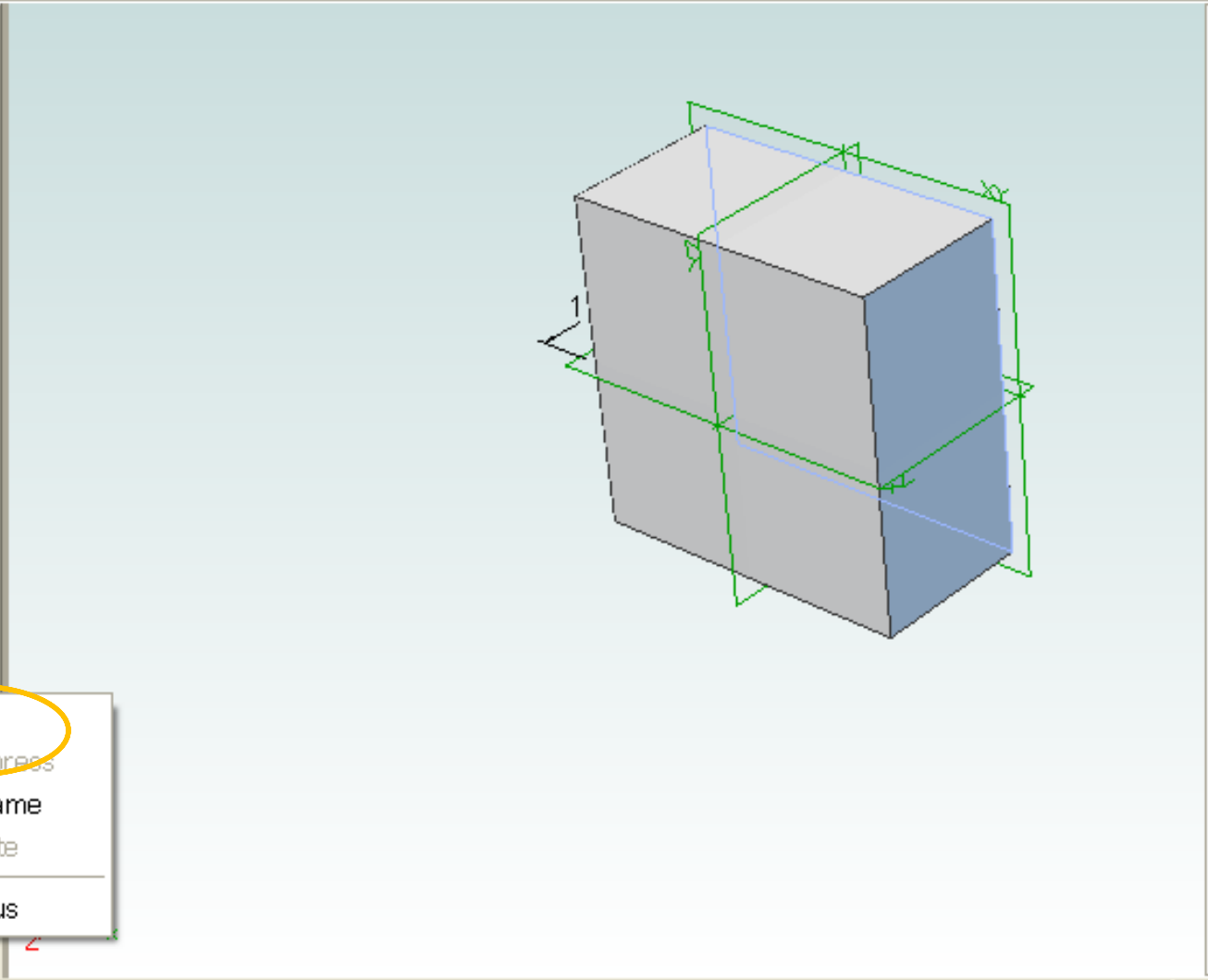




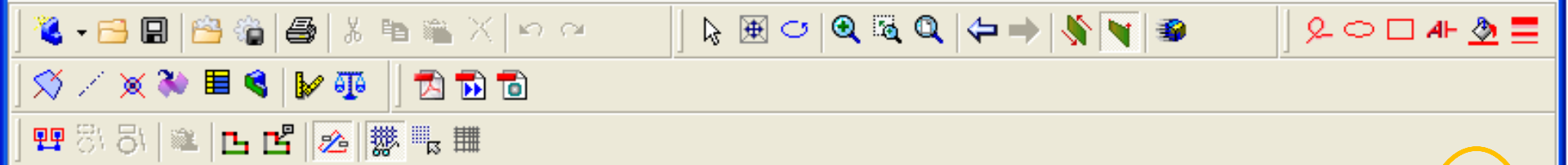
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- Edit
- Suppress
- Rename
- Delete
- Status

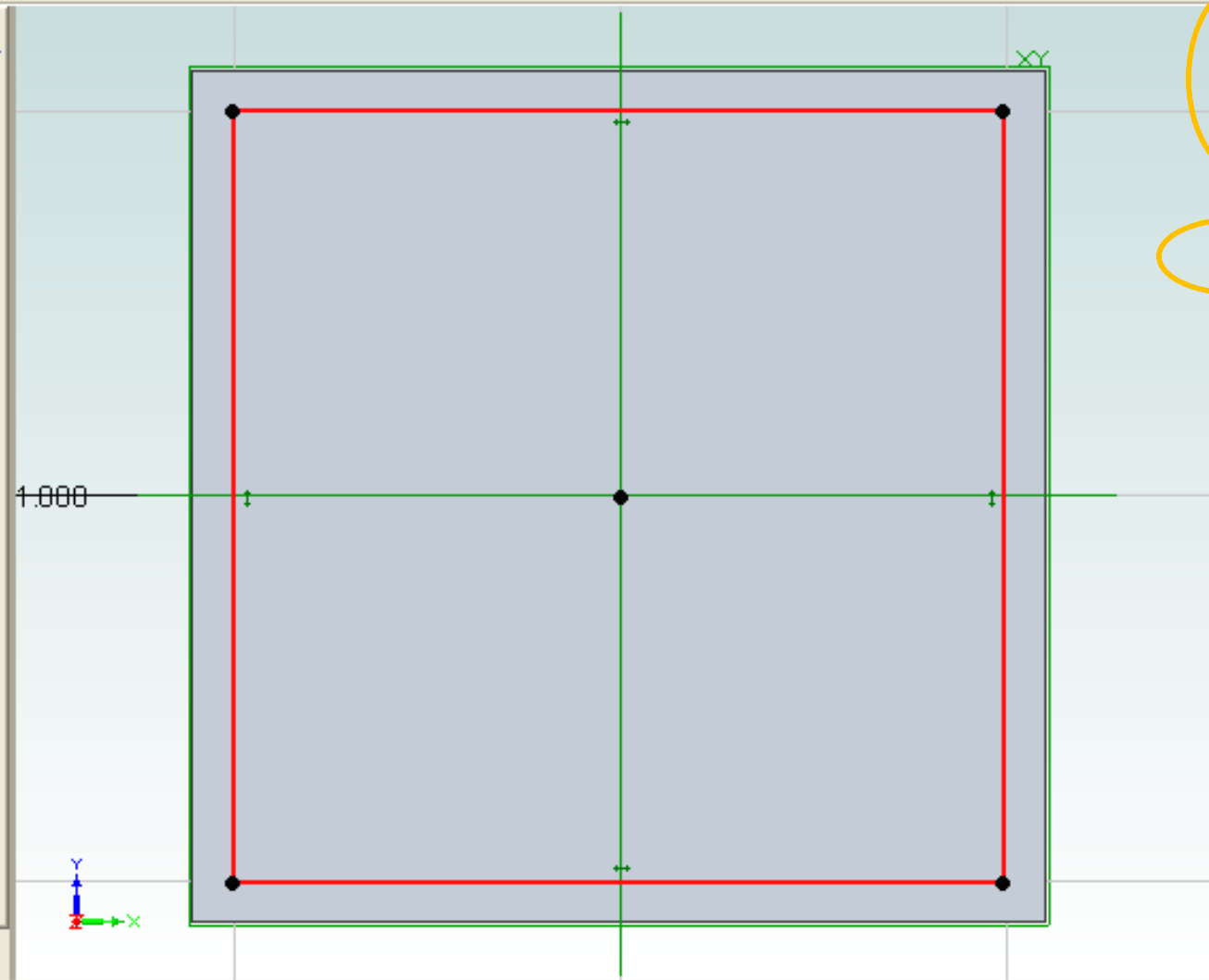


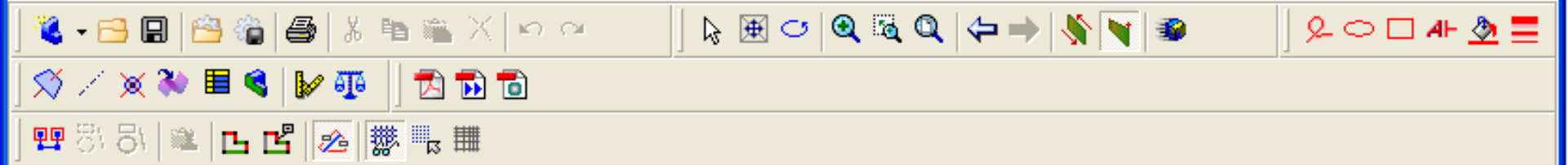




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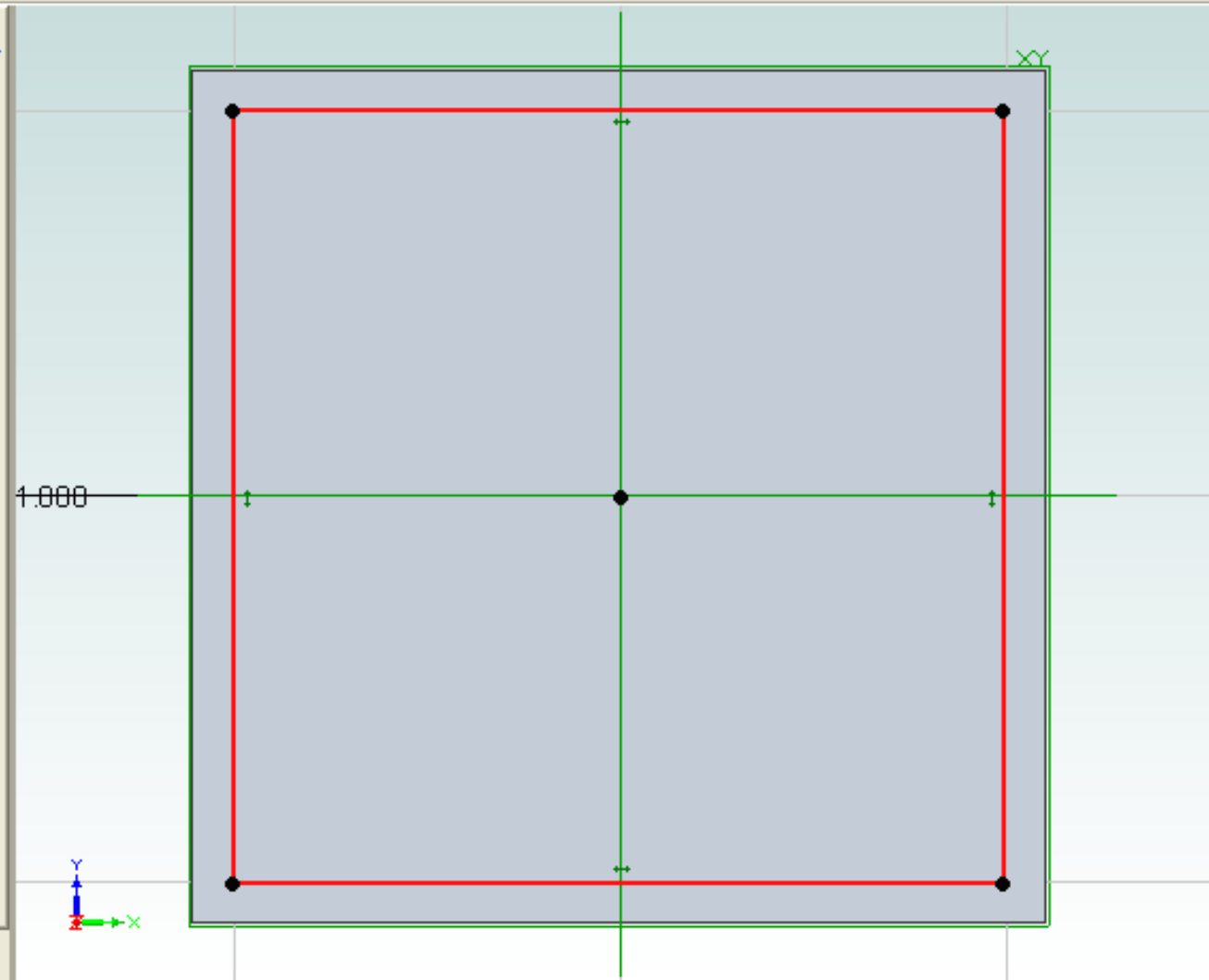
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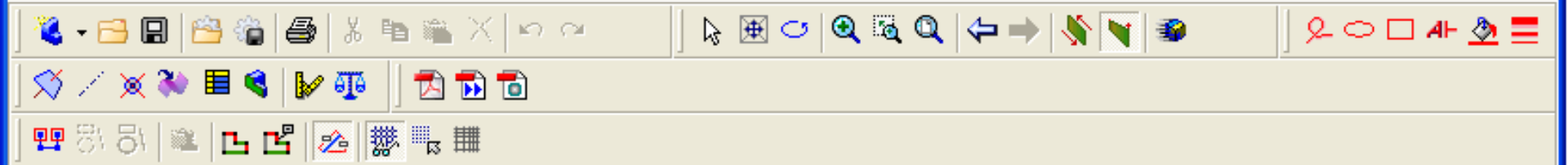
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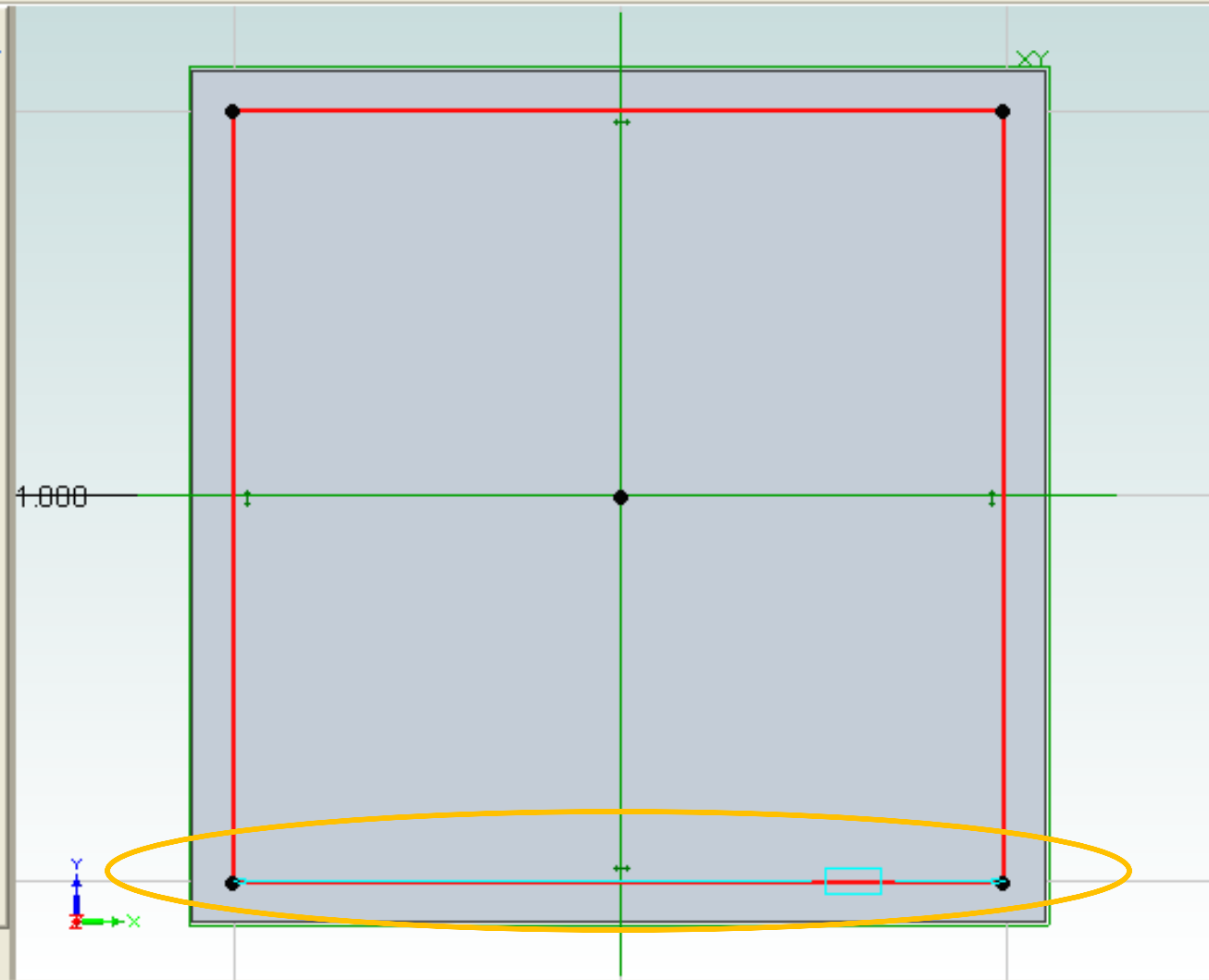
**Dimension**

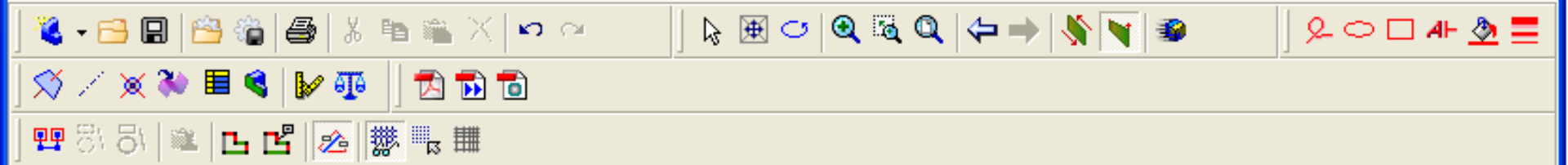
The image shows the dimension toolbars on the right side of the CAD software. The top toolbar contains icons for dimensioning (Dimension, Dimension Line, Dimension Text, Dimension Style, Dimension Hide/Show). The bottom toolbar contains icons for dimensioning (Dimension, Dimension Line, Dimension Text, Dimension Style, Dimension Hide/Show).



### Design Explorer

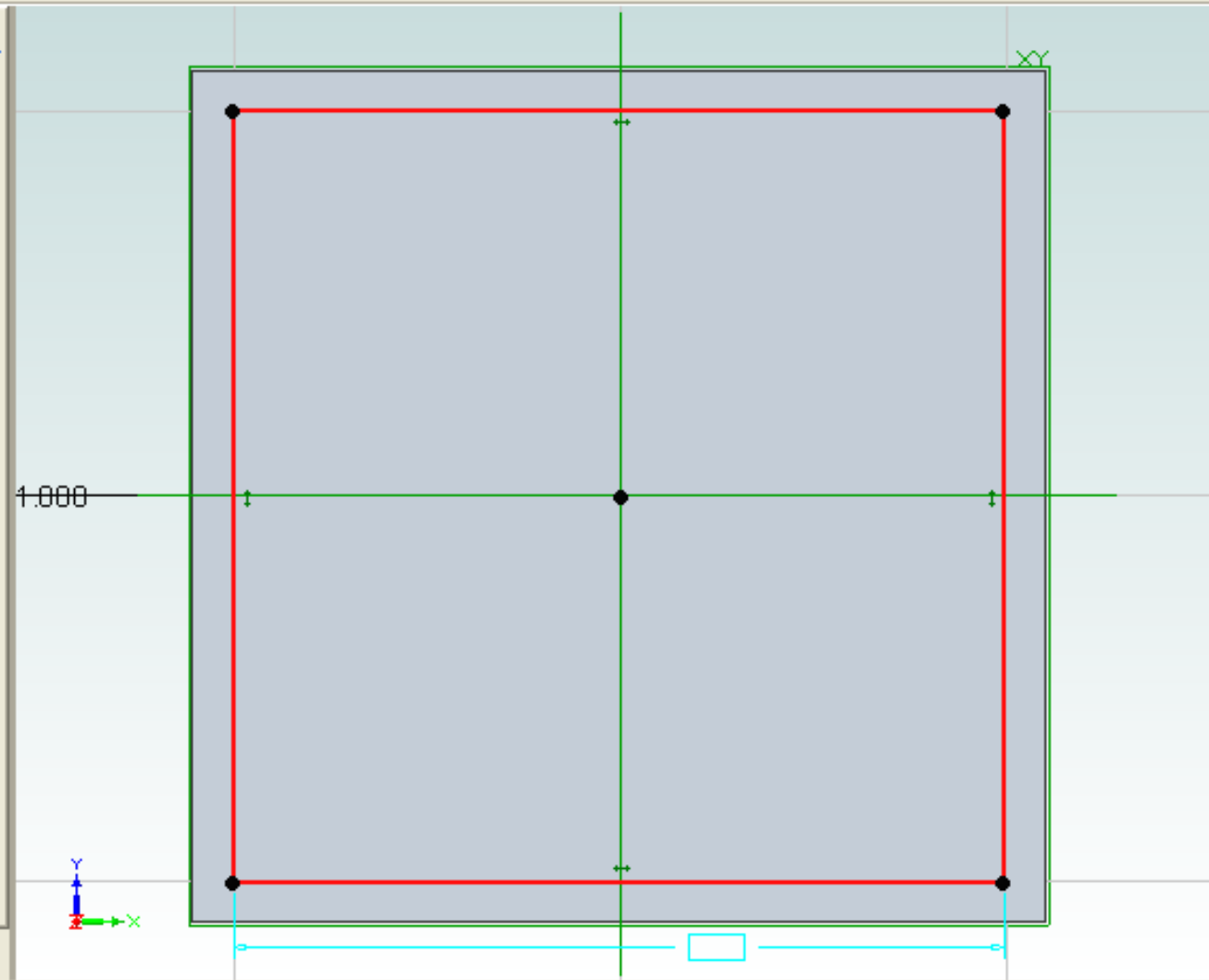
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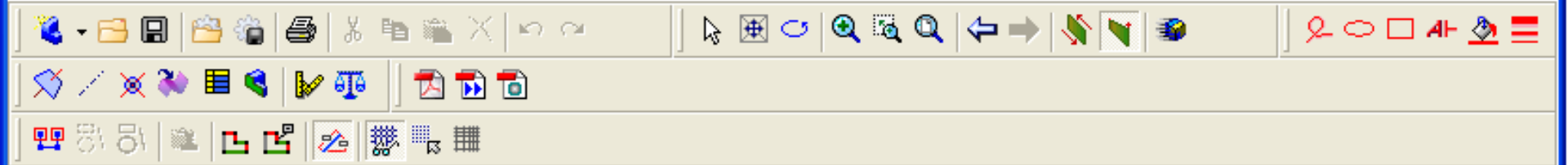


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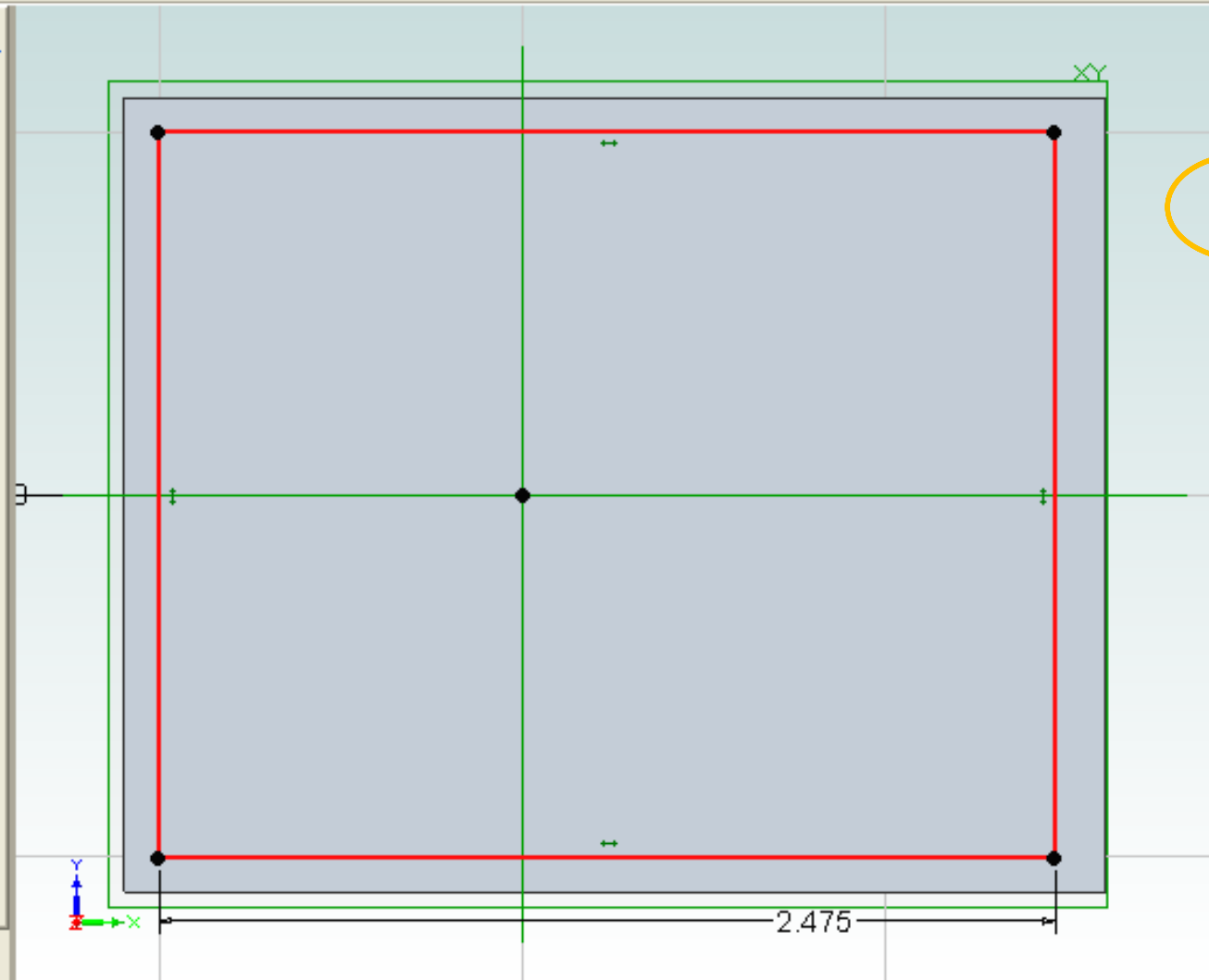


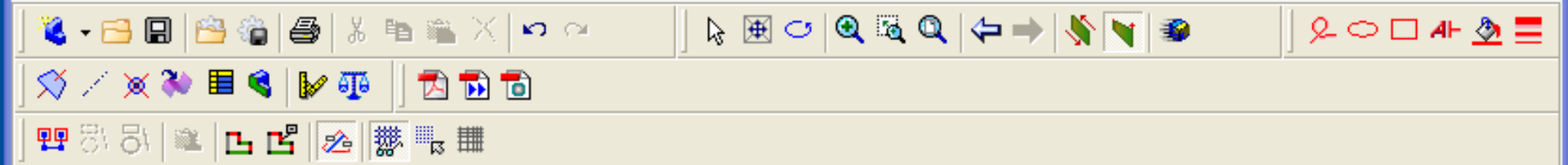




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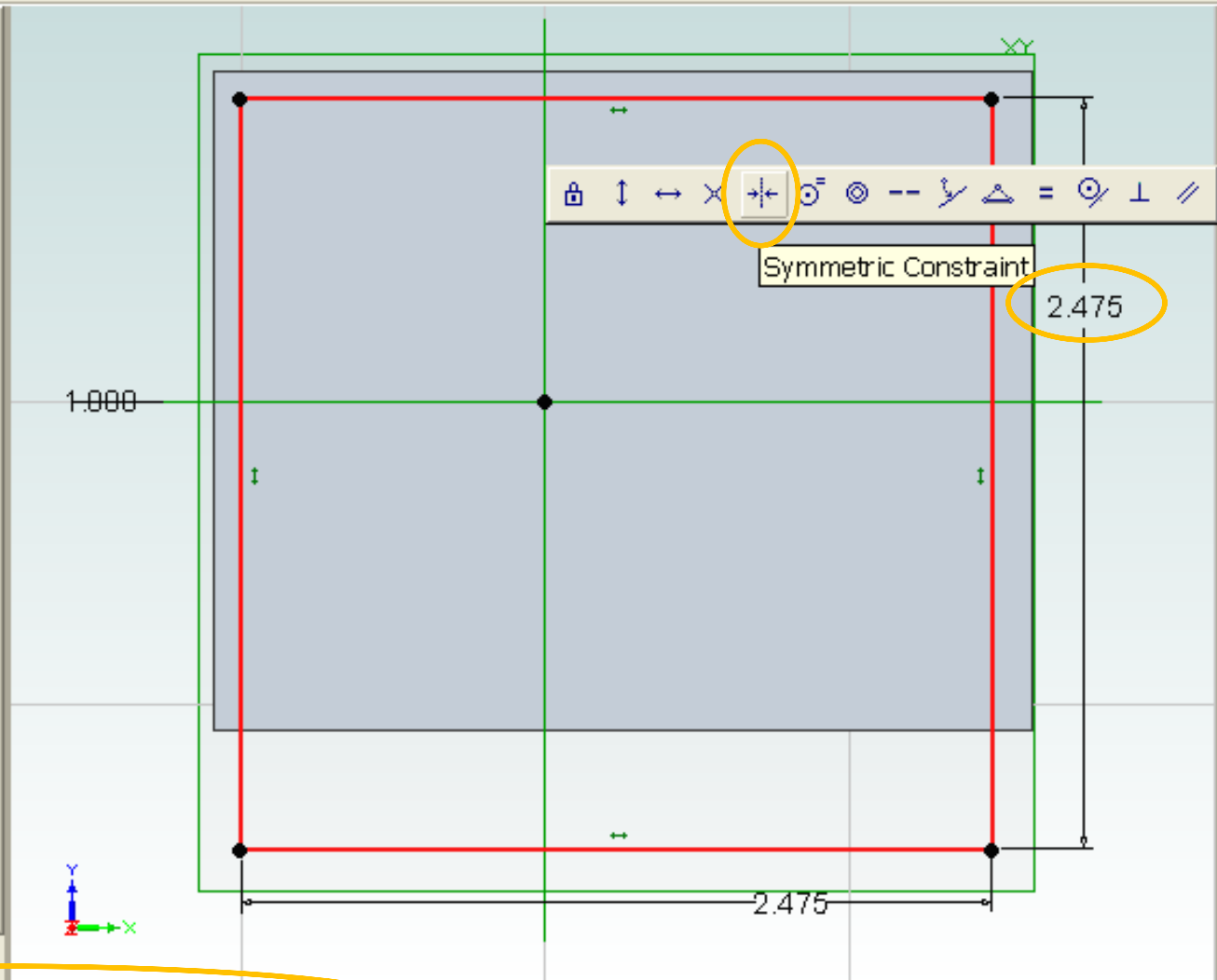
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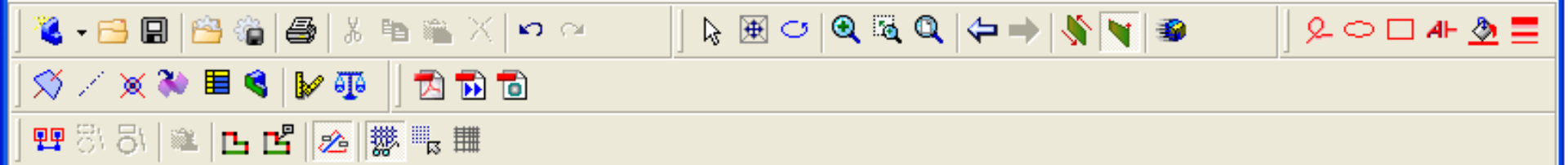


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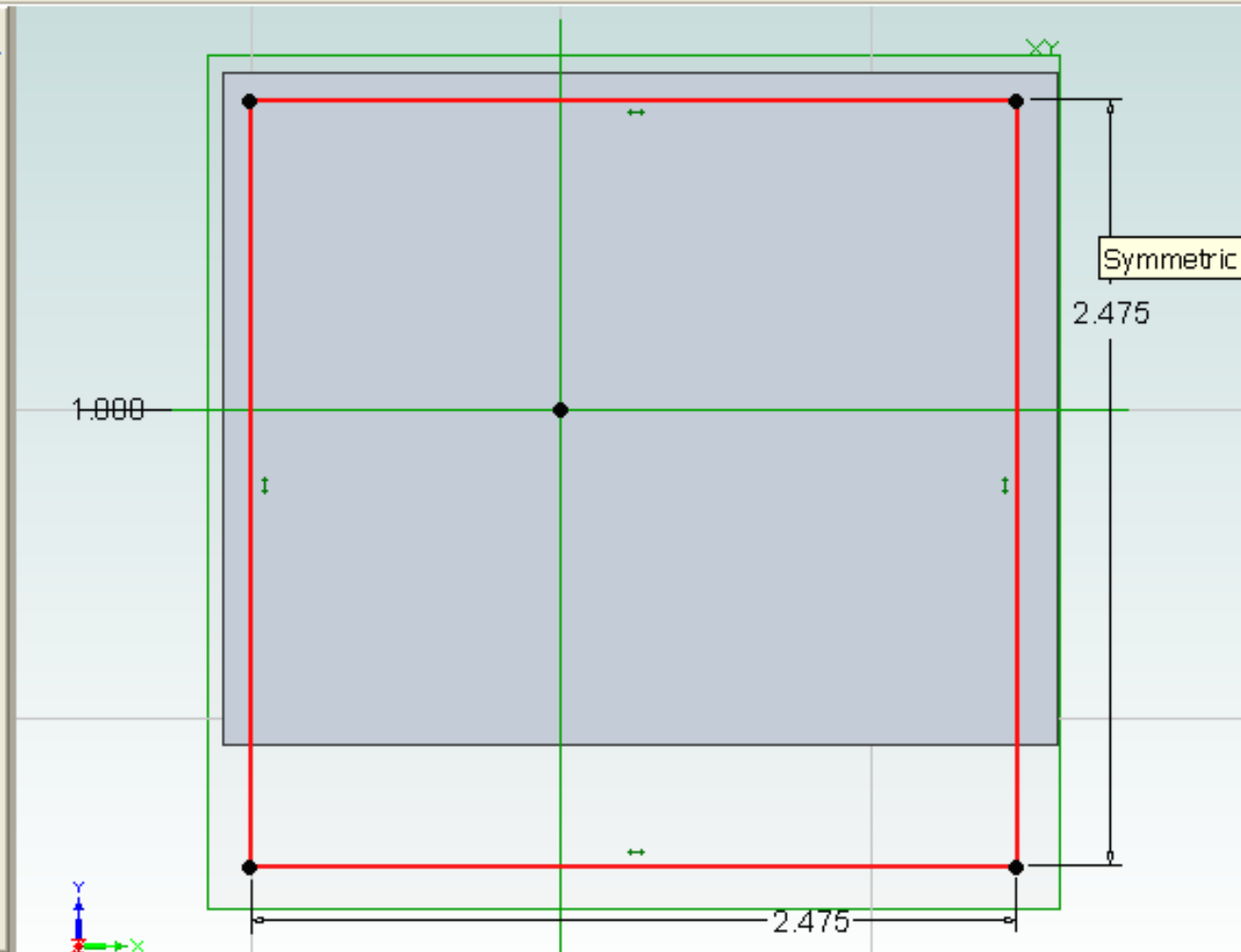


Applies a symmetric constraint between an axis of symmetry and two figures



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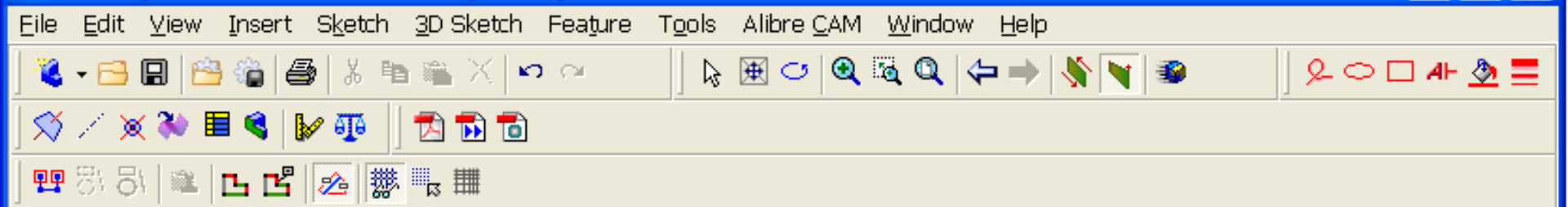
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Right-side toolbar with icons for sketching, editing, and viewing.

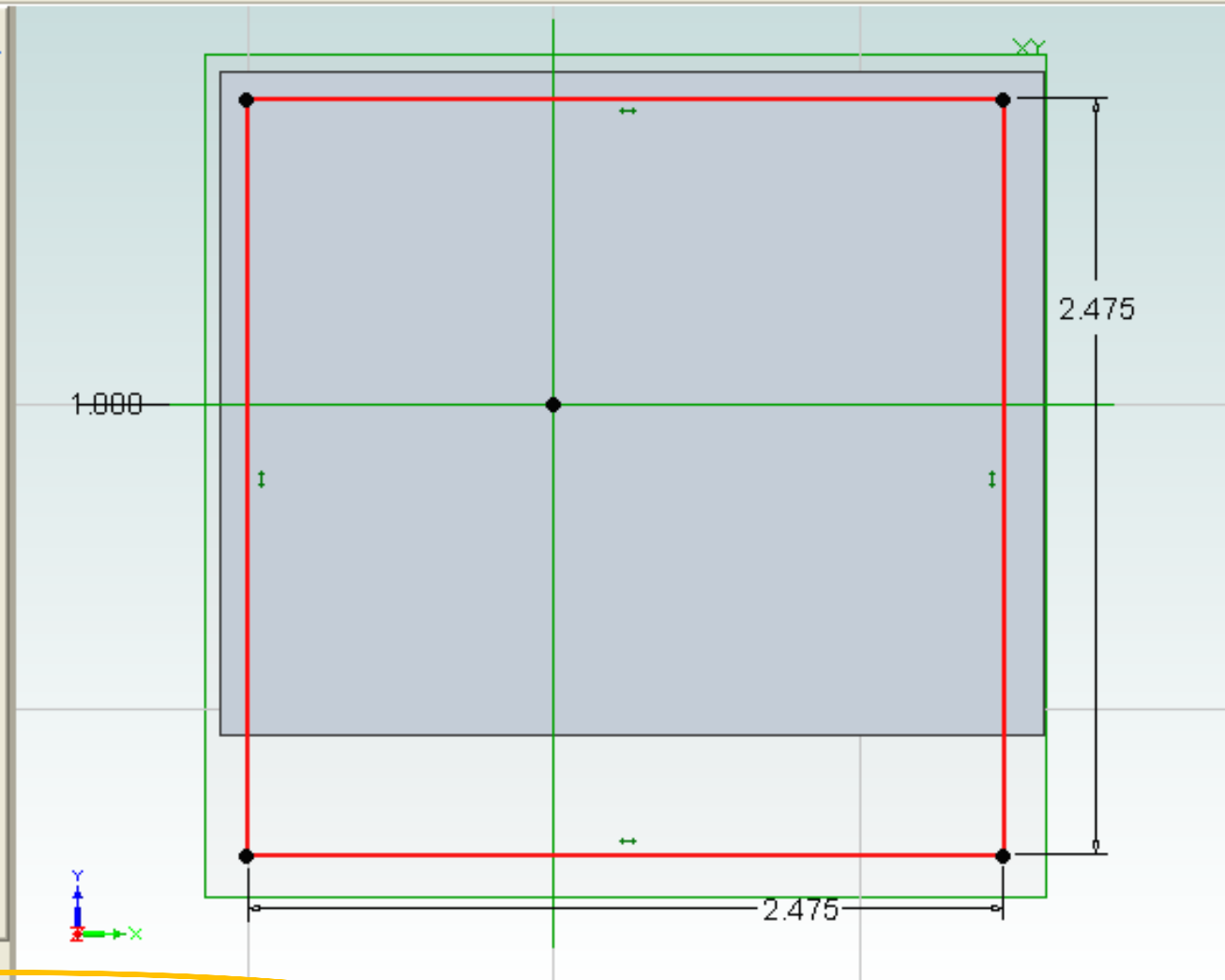
Symmetric Constraint

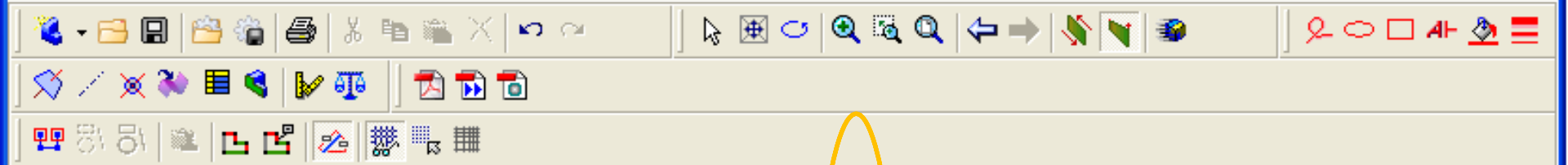




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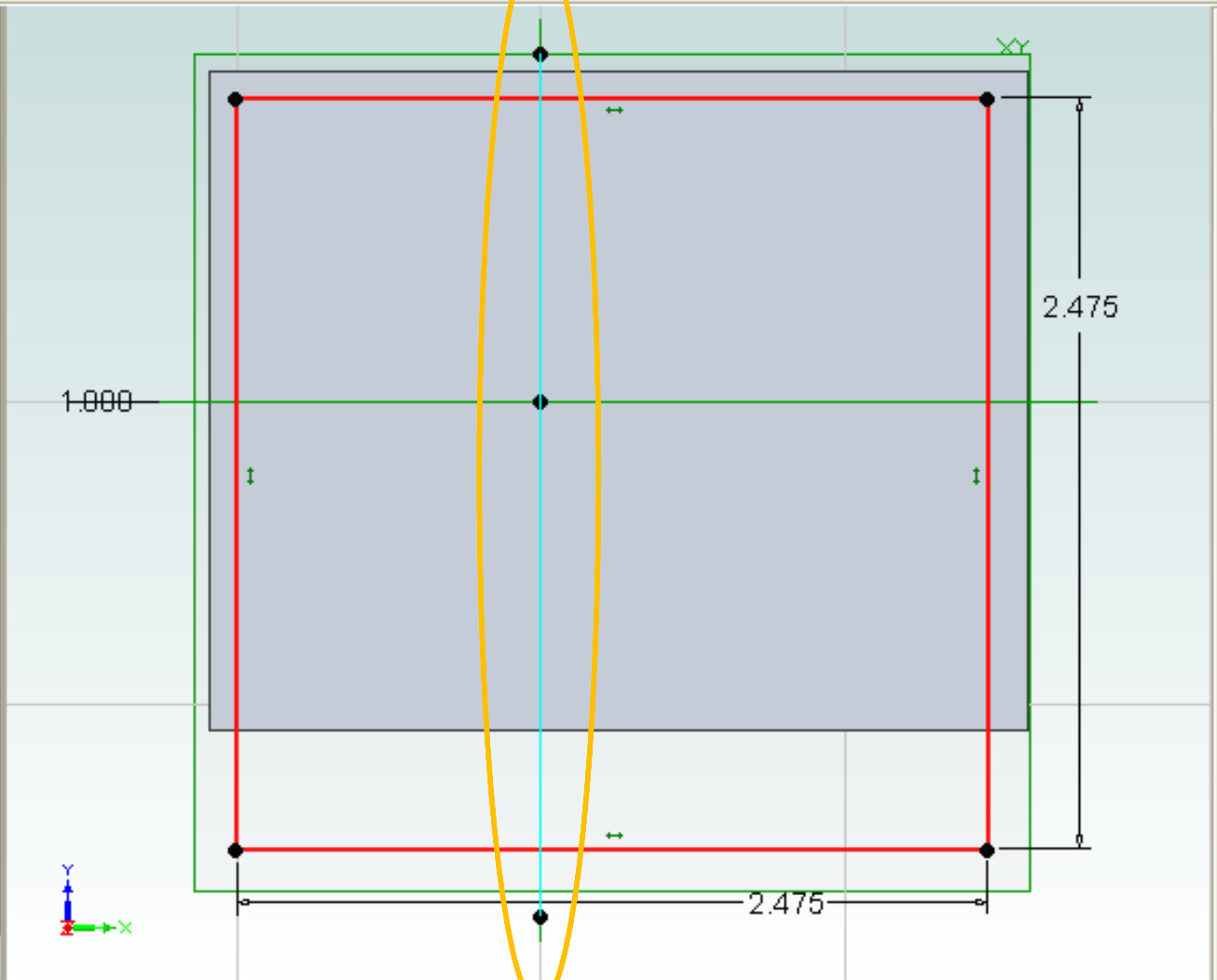
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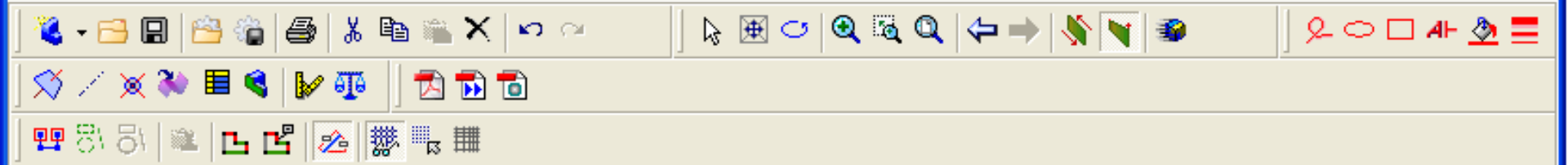




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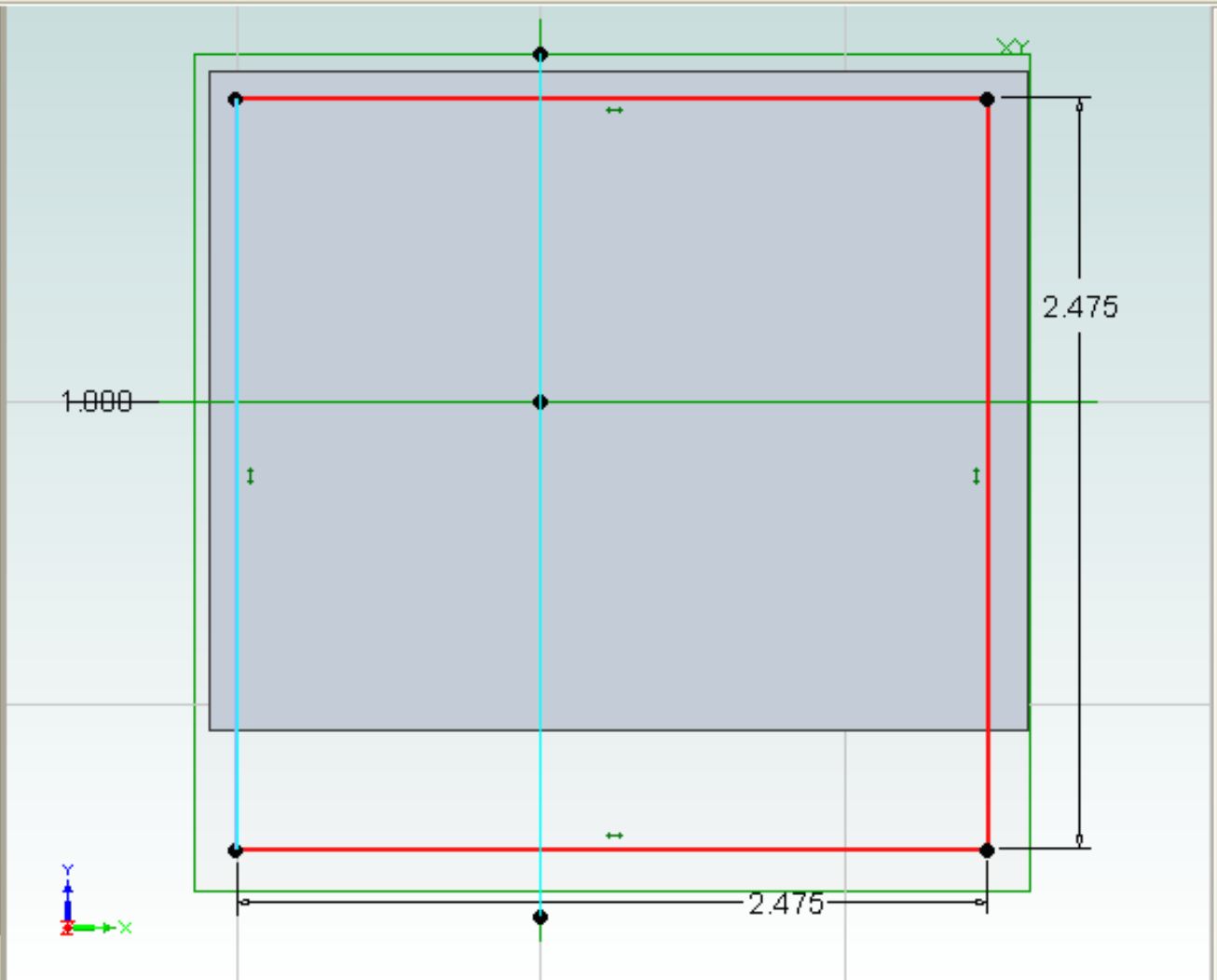


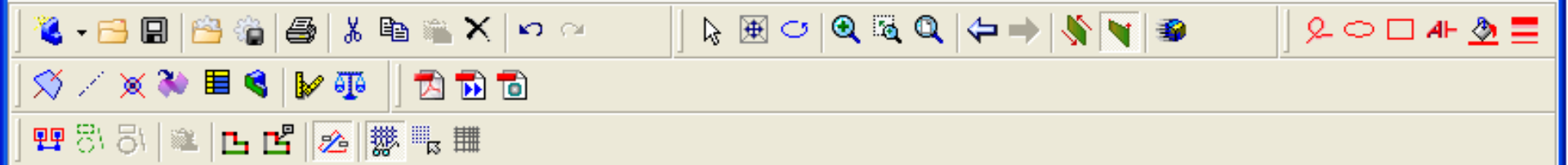


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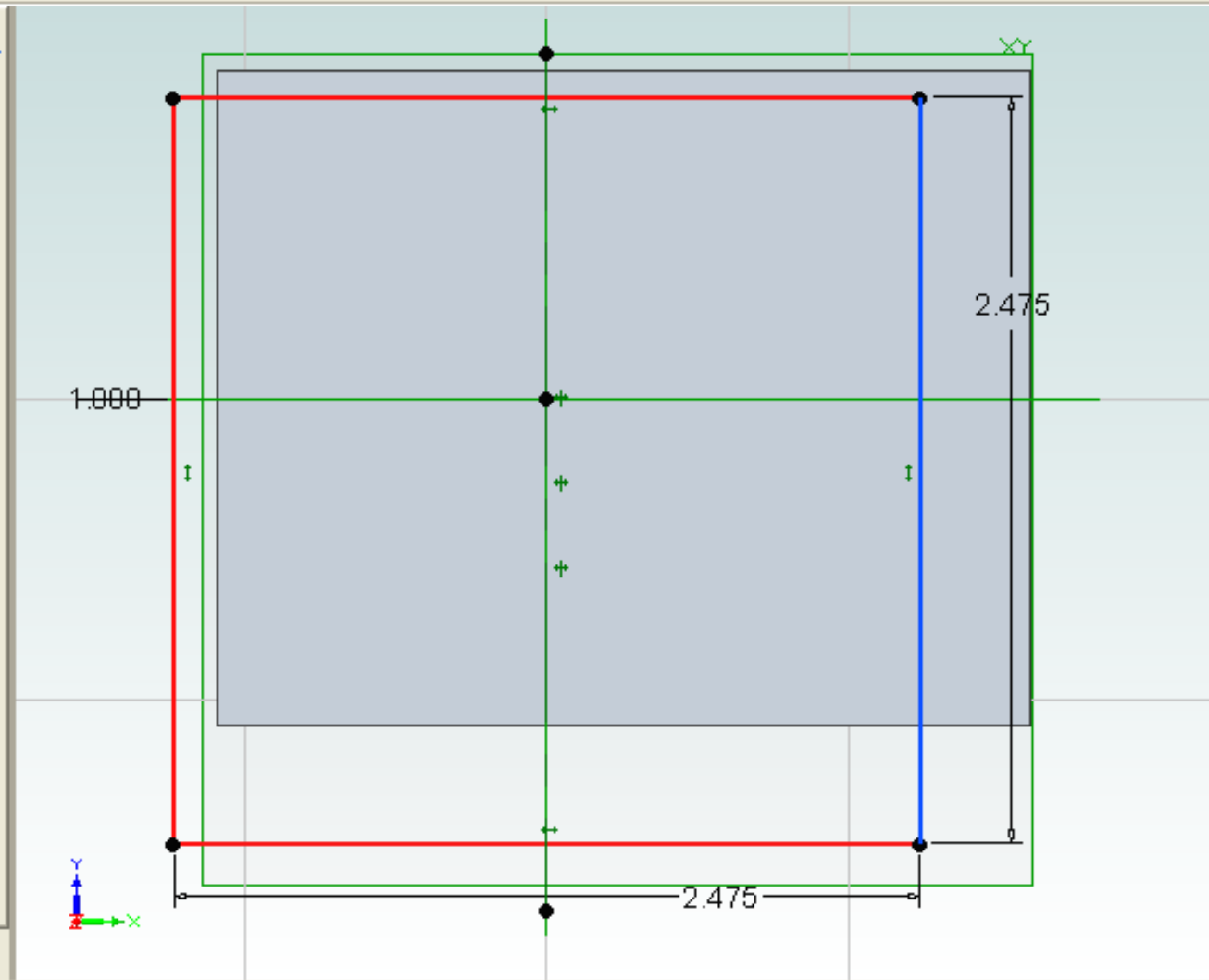
Design Explorer | Alibre CAM

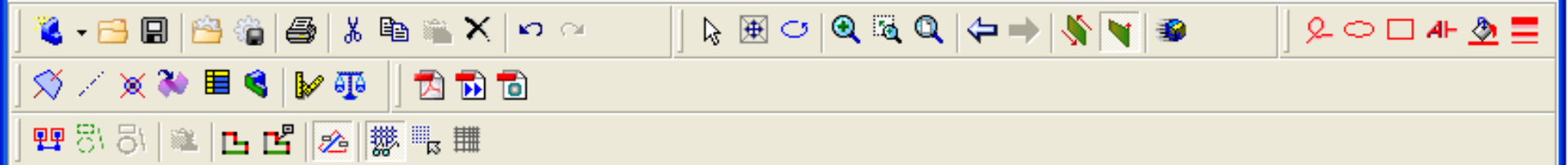




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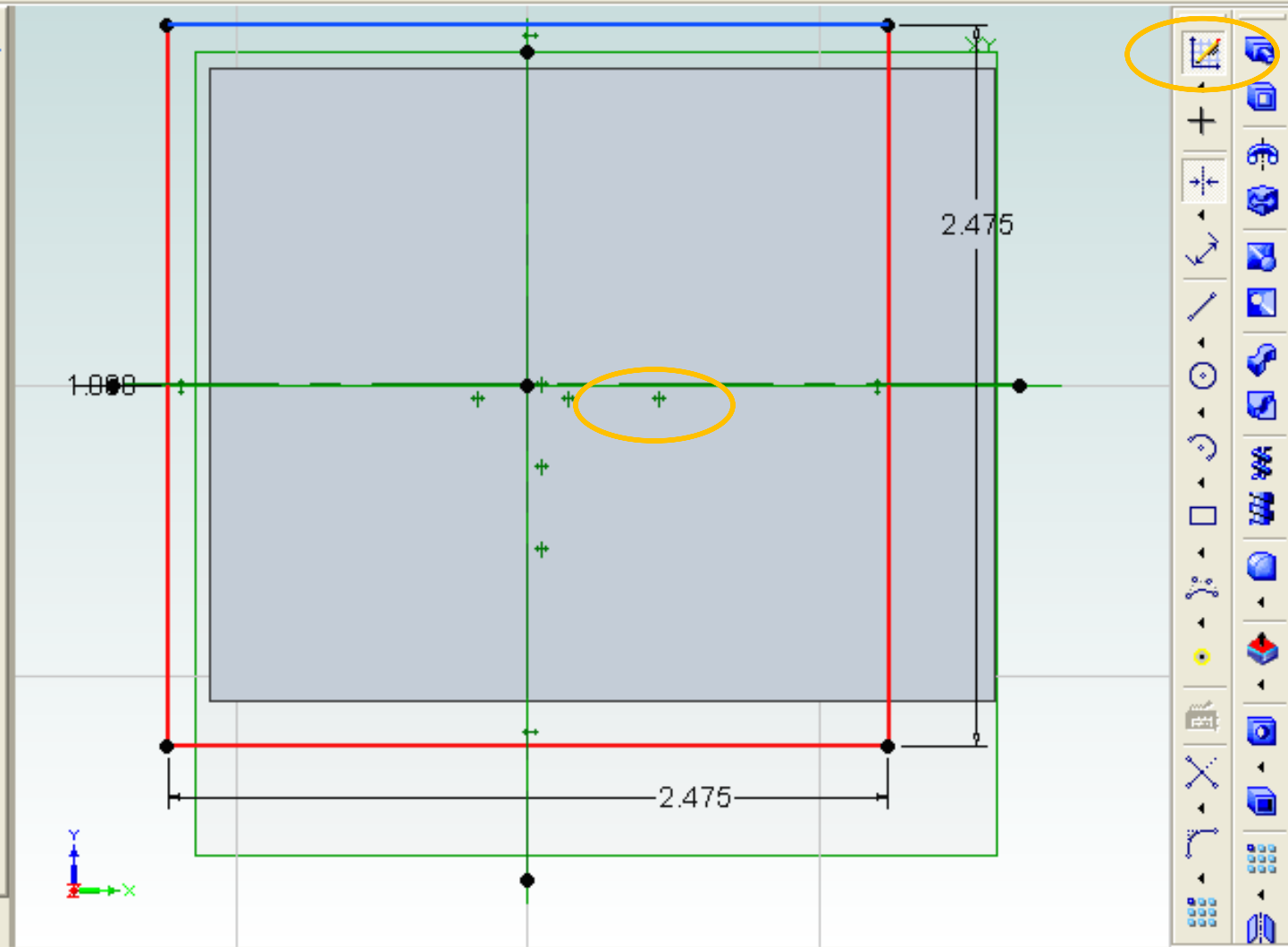
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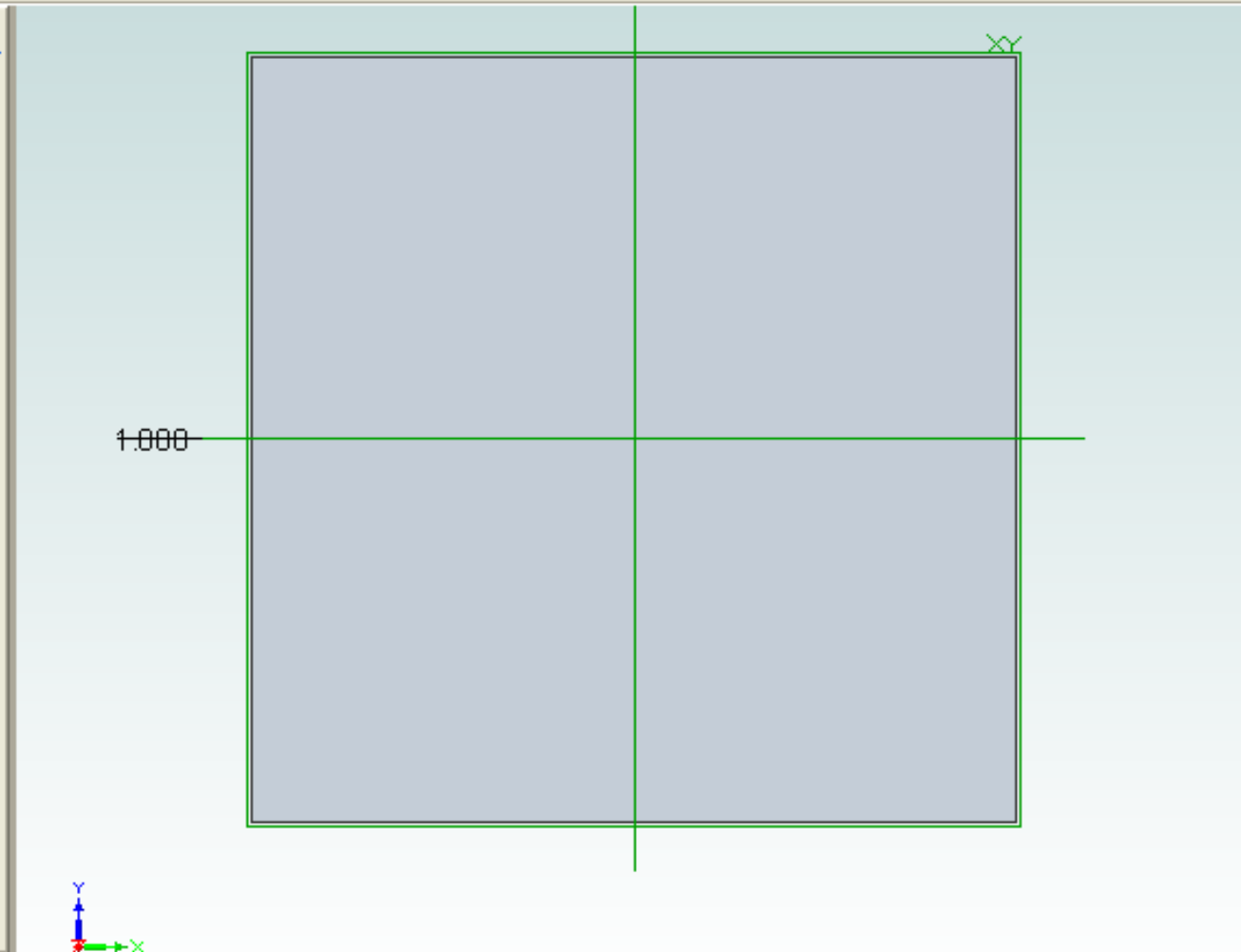
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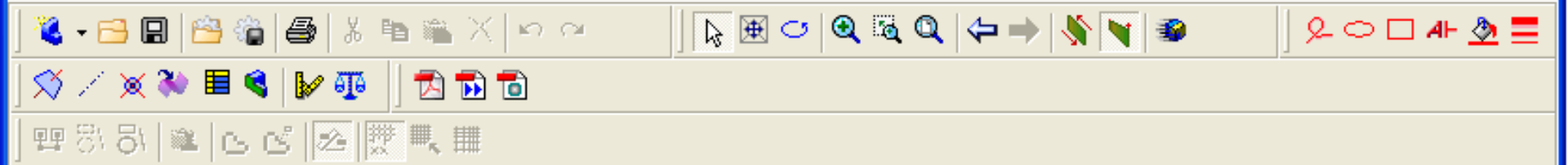




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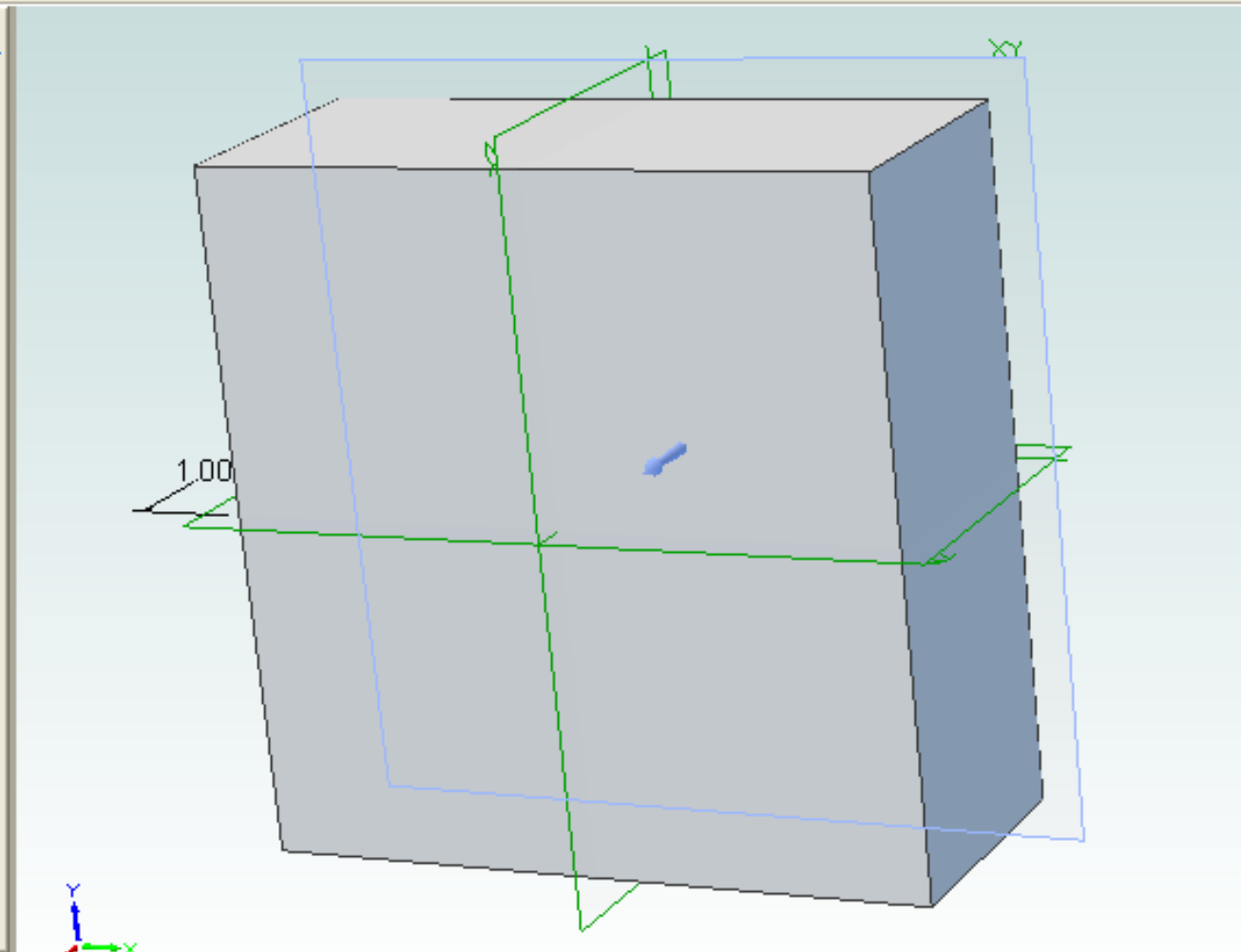
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  - Vertices

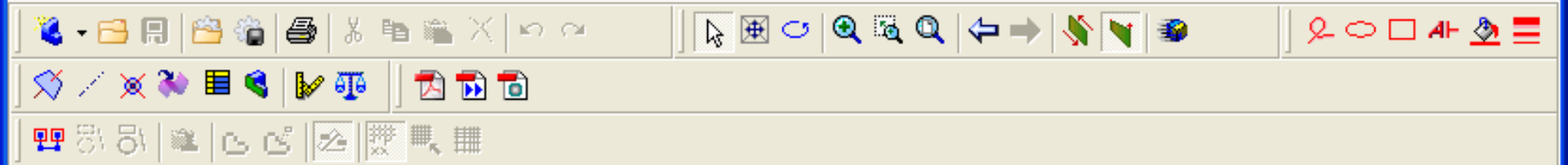




### Design Explorer

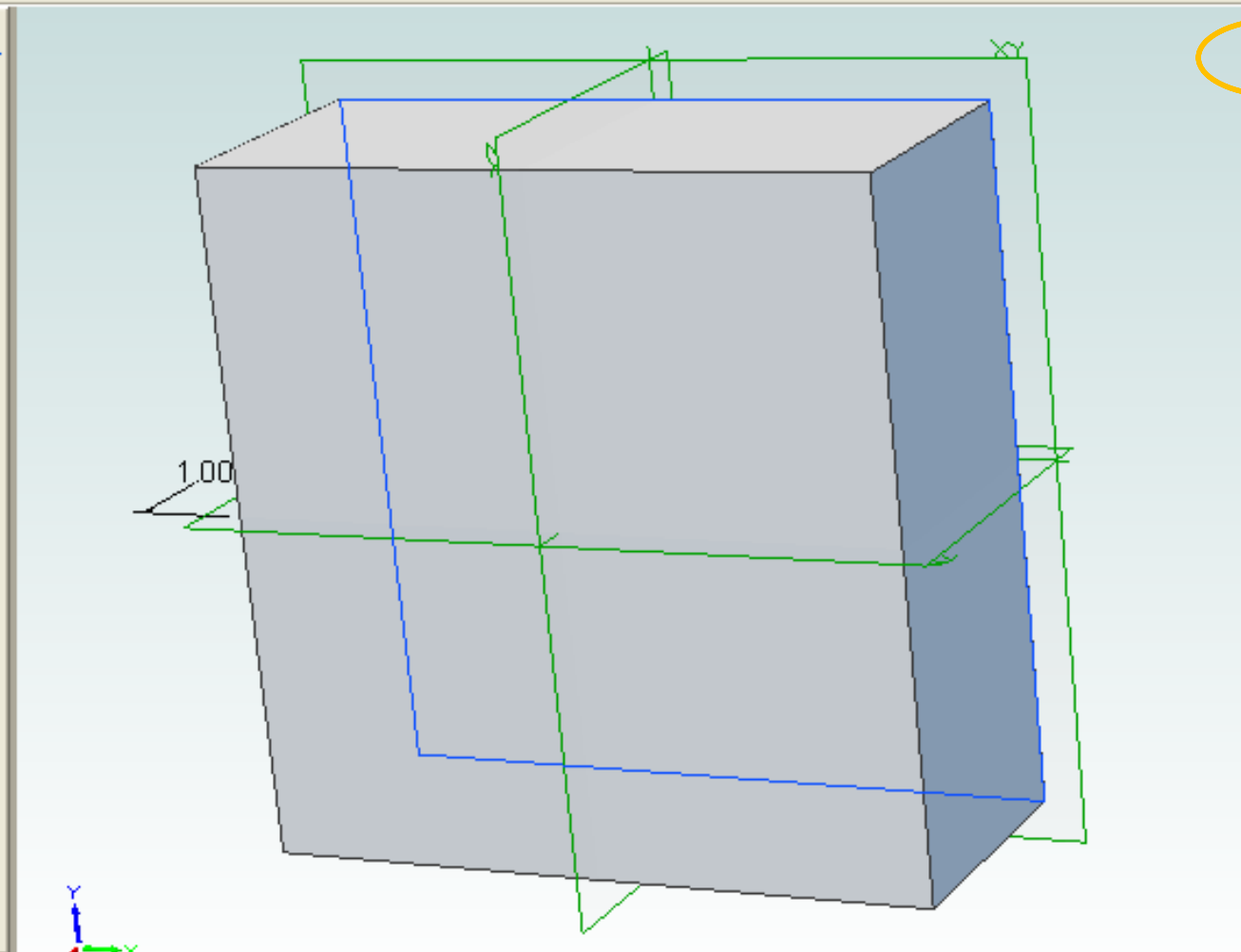
- 10DegBlock
  - Configurations
    - Config<1>
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    - X-Axis
    - Y-Axis
    - Z-Axis
  - Planes
    - XY-Plane
    - YZ-Plane
    - ZX-Plane
  - Points
    - Origin
  - Surfaces
  - Redline Views
  - Section Views
  - Features
    - Extrusion<1>
      - Sketch<1>
  - Edges
  - Faces
  - Vertices



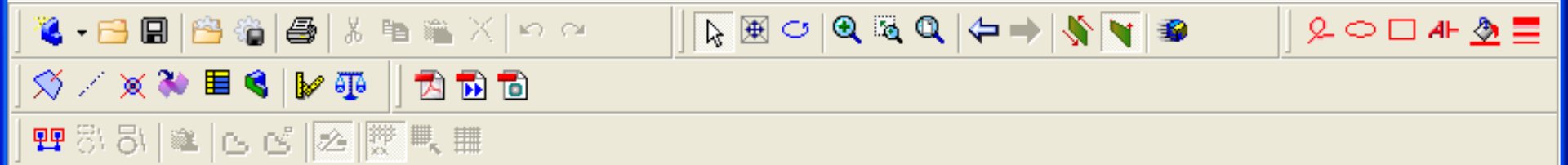


**Design Explorer**

- 10DegBlock
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    - Config<1>
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    - Y-Axis
    - Z-Axis
  - Planes
    - XY-Plane
    - YZ-Plane
    - ZX-Plane
  - Points
    - Origin
  - Surfaces
  - Redline Views
  - Section Views
  - Features
    - Extrusion<1>
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  - Edges
  - Faces
  - Vertices

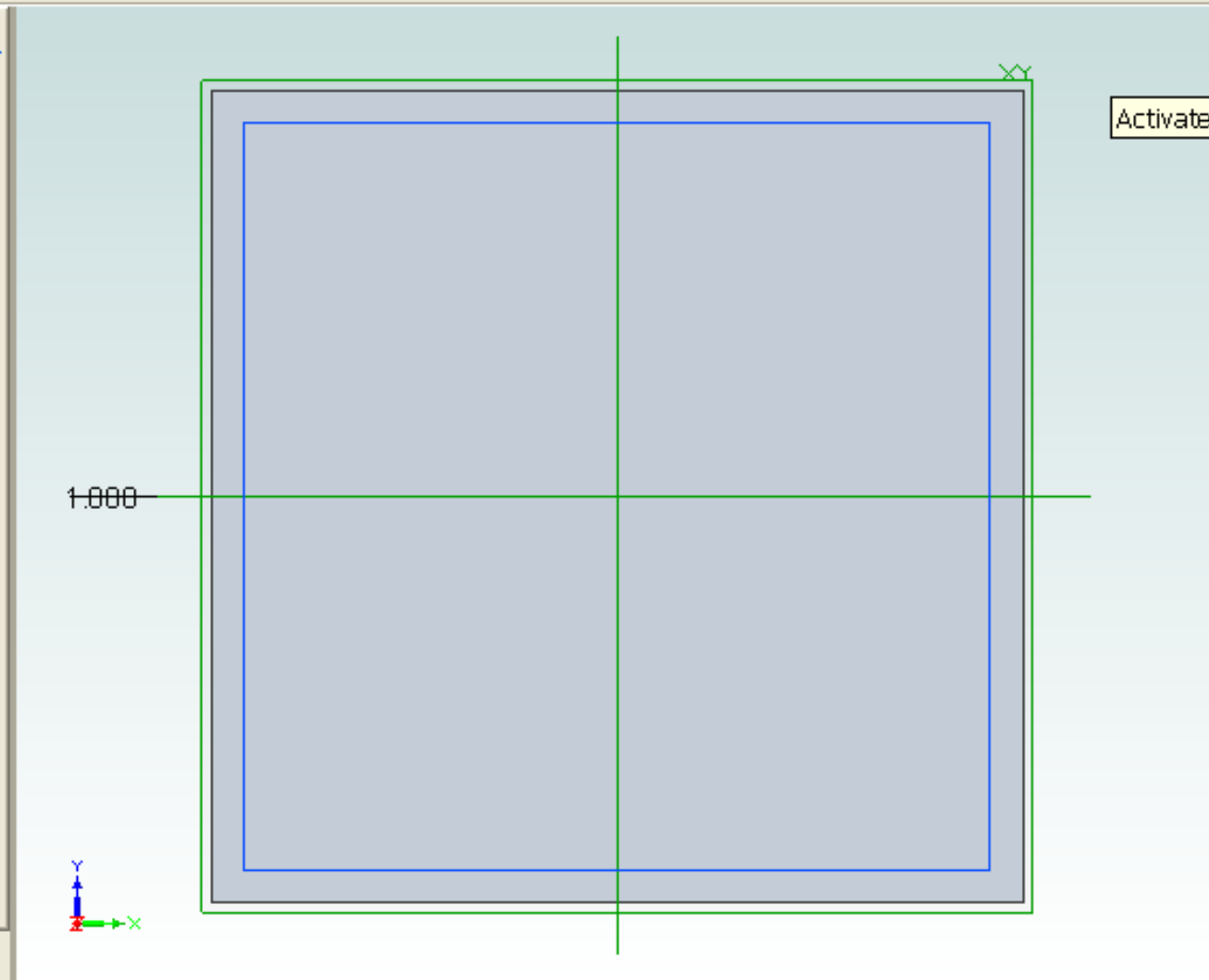






**Design Explorer**

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  - Points
    - Origin
  - Surfaces
  - Redline Views
  - Section Views
  - Features
    - Extrusion<1>
      - Sketch<1>
  - Edges
  - Faces
  - Vertices



Activate 2D Sketch



# Edit Sketch



Would you like to:

- Edit Sketch<1>
- Create Sketch<2>

Show this message next time

OK

Cancel





# Edit Sketch



Would you like to:

- Edit Sketch<1>
- Create Sketch<2>**

Show this message next time

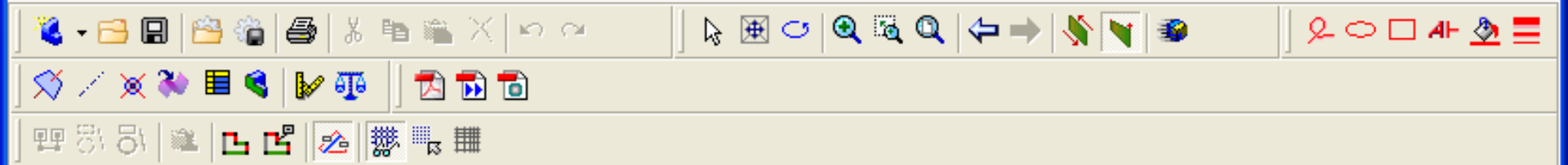
OK

Cancel



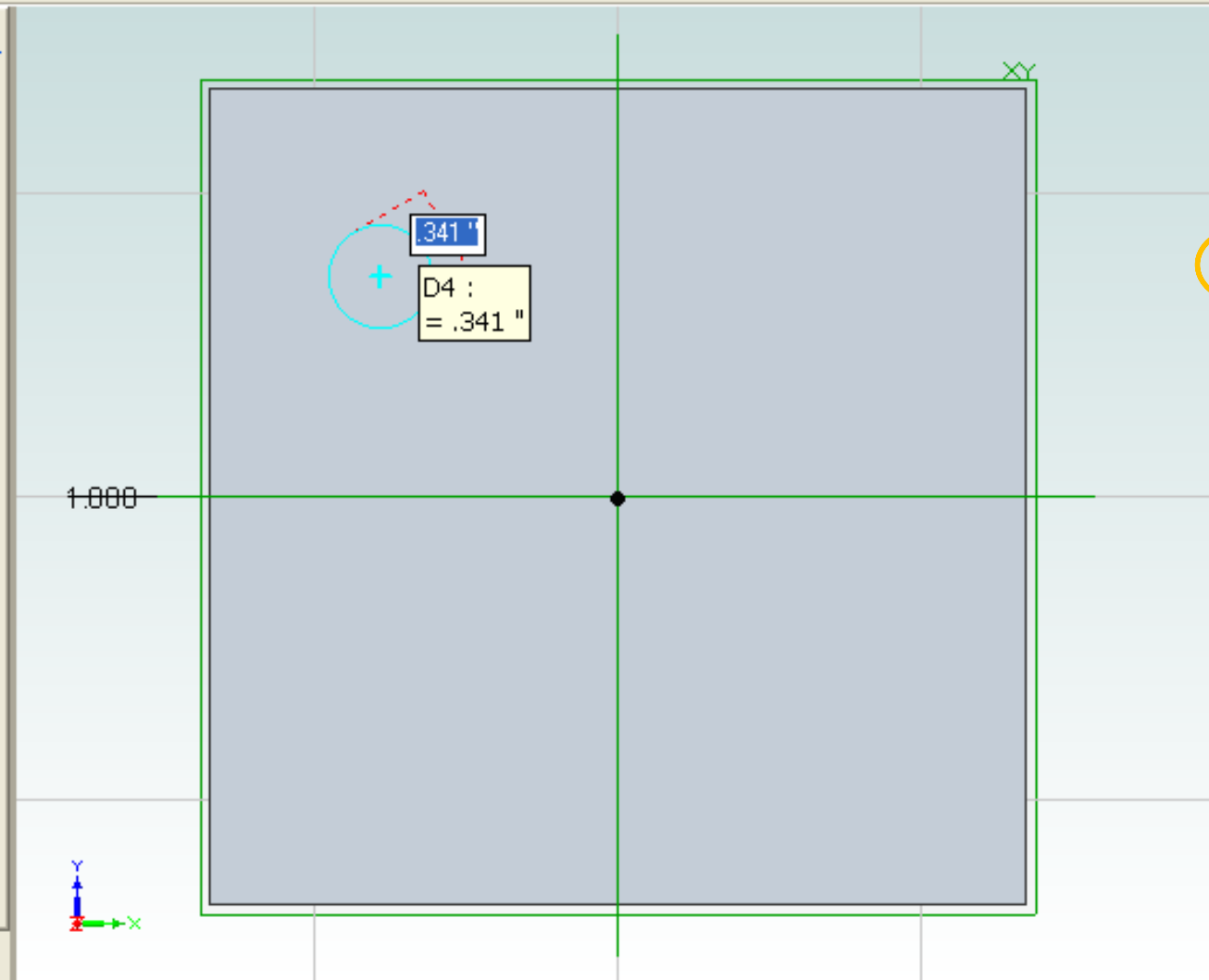




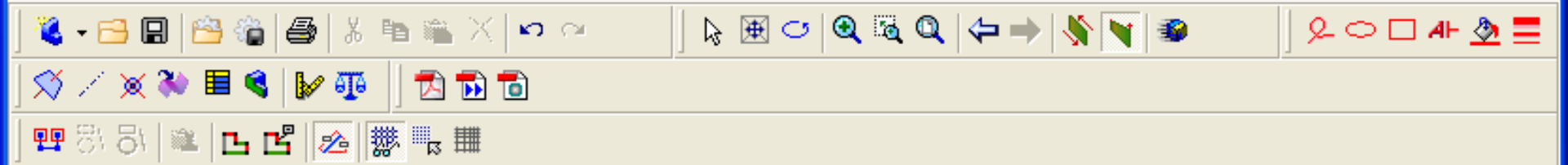


**Design Explorer**

- 10DegBlock
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    - Config<1>
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    - Y-Axis
    - Z-Axis
  - Planes
    - XY-Plane
    - YZ-Plane
    - ZX-Plane
  - Points
    - Origin
  - Surfaces
  - Redline Views
  - Section Views
  - Features
    - Extrusion<1>
      - Sketch<1>
  - Edges
  - Faces
  - Vertices

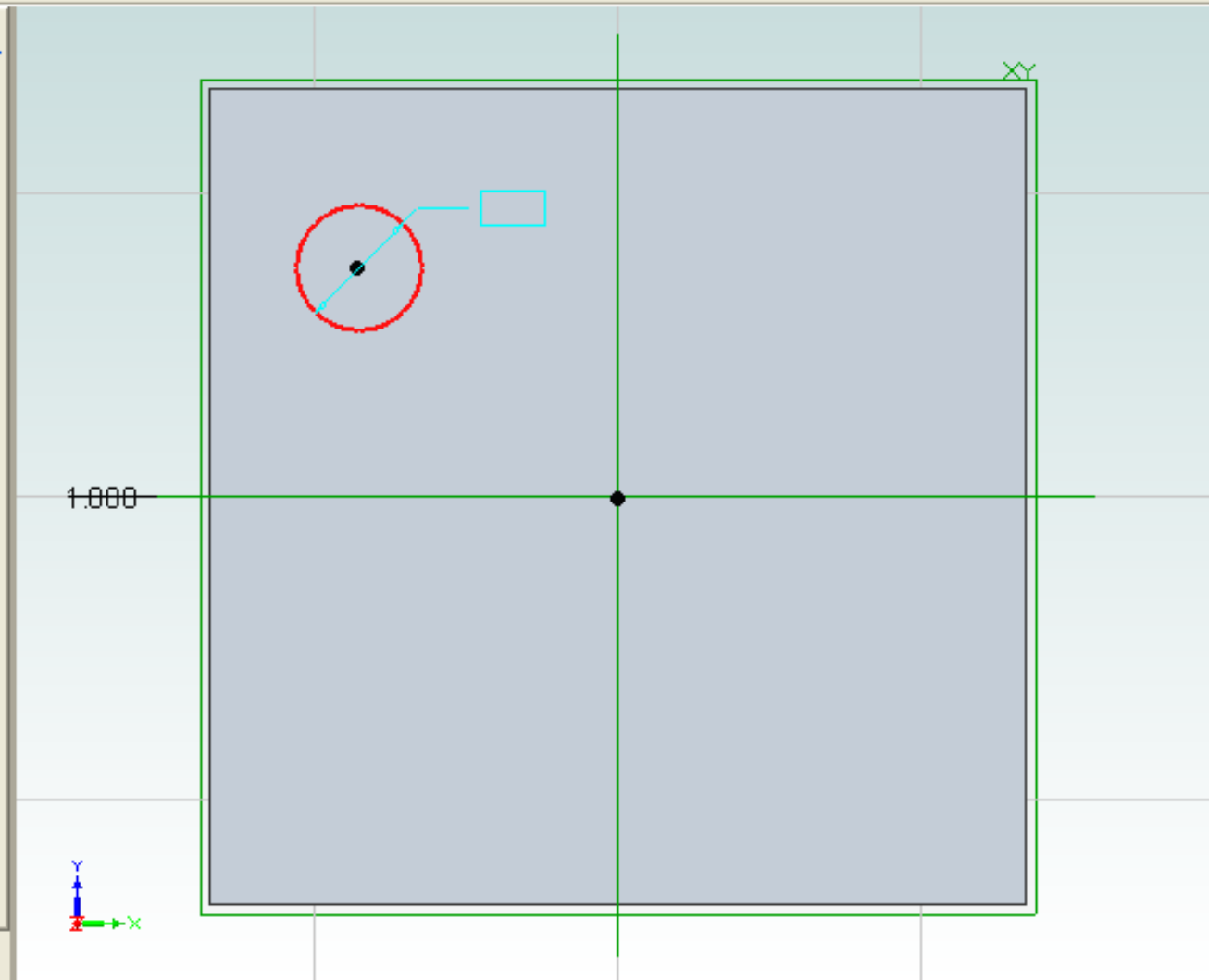


Vertical toolbar with various CAD tools. A yellow circle highlights the 'Pick Next Point' tool.



**Design Explorer**

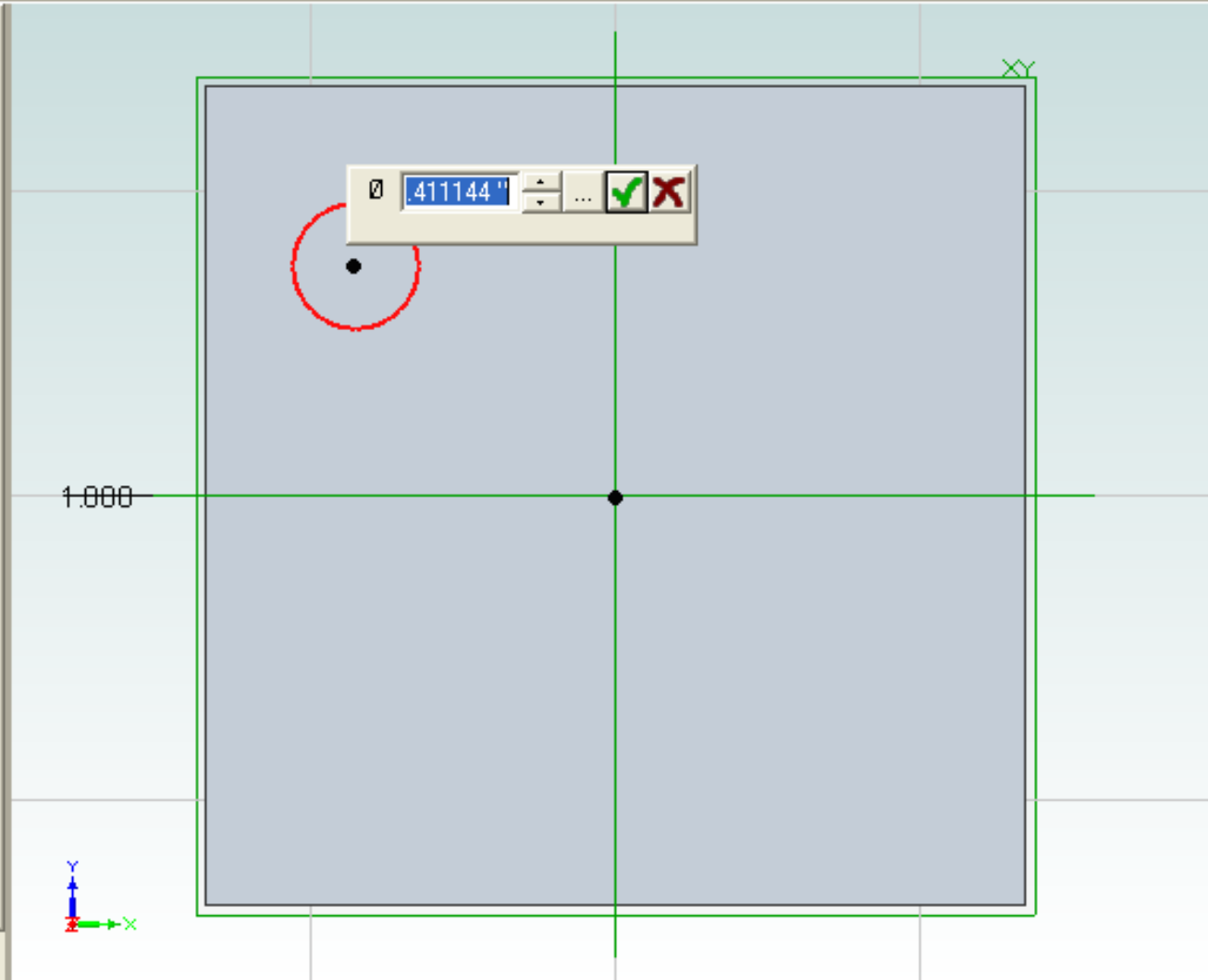
- 10DegBlock
  - Configurations
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    - Z-Axis
  - Planes
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  - Section Views
  - Features
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      - Sketch<1>
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  - Faces
  - Vertices



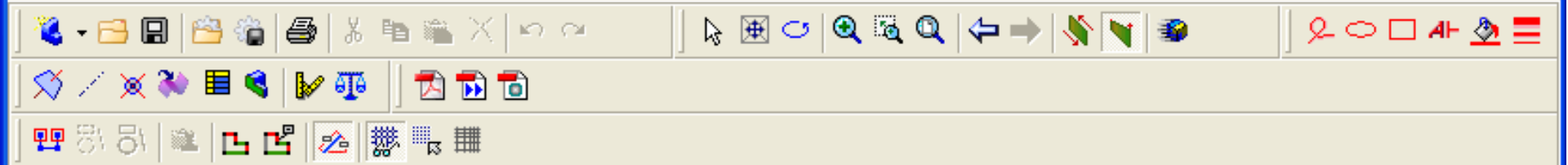


**Design Explorer**

- 10DegBlock
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    - YZ-Plane
    - ZX-Plane
  - Points
    - Origin
  - Surfaces
  - Redline Views
  - Section Views
  - Features
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  - Edges
  - Faces
  - Vertices

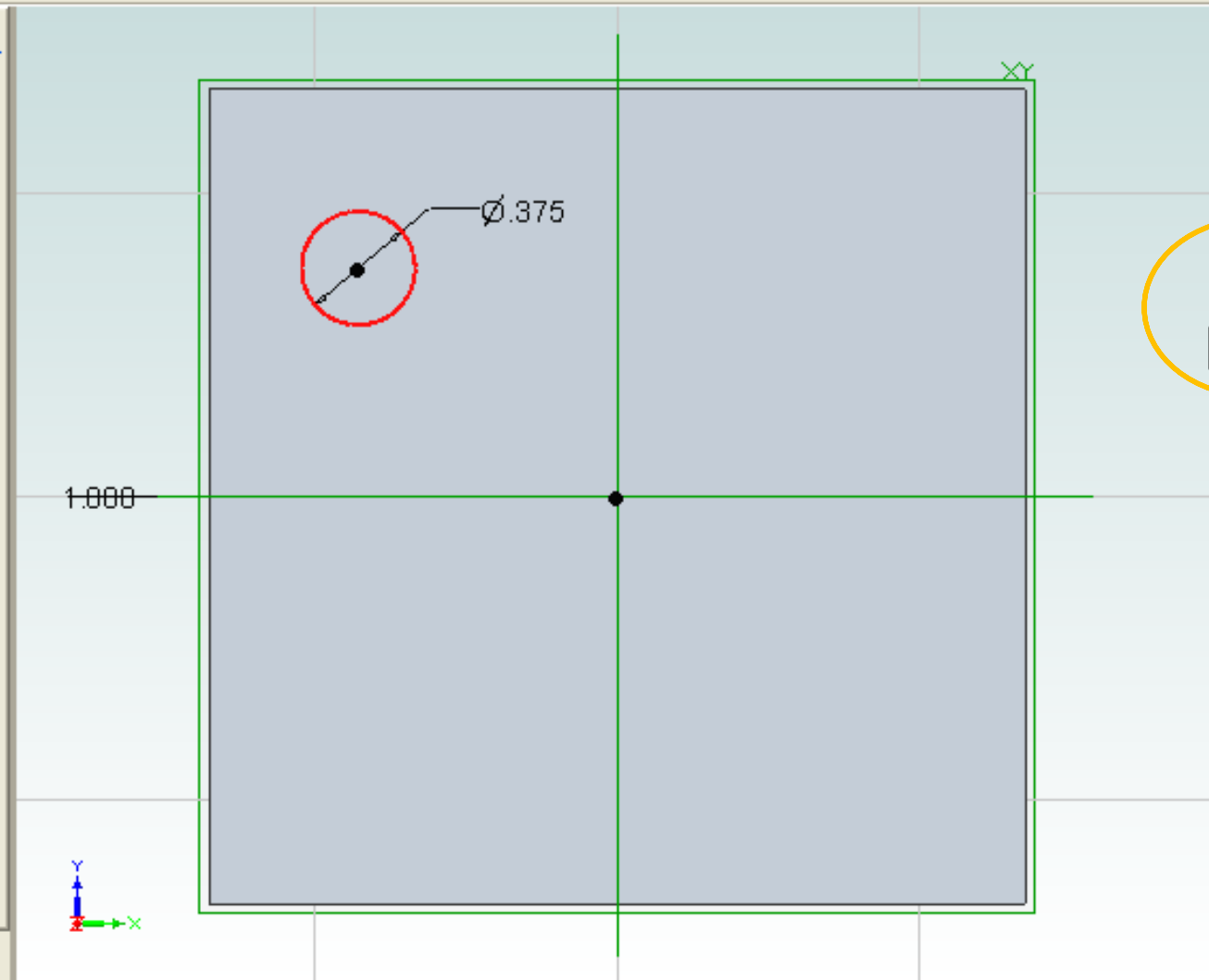




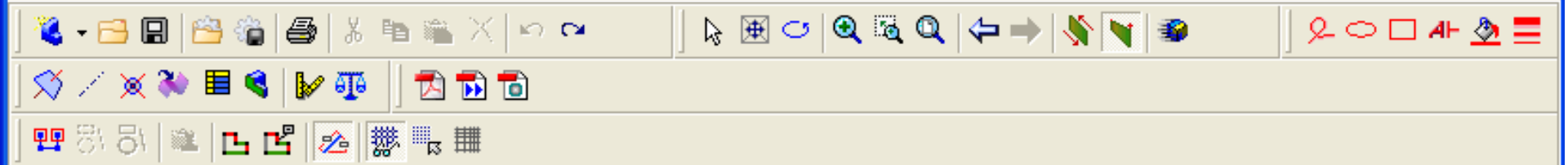


### Design Explorer

- 10DegBlock
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    - ZX-Plane
  - Points
    - Origin
  - Surfaces
  - Redline Views
  - Section Views
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  - Edges
  - Faces
  - Vertices

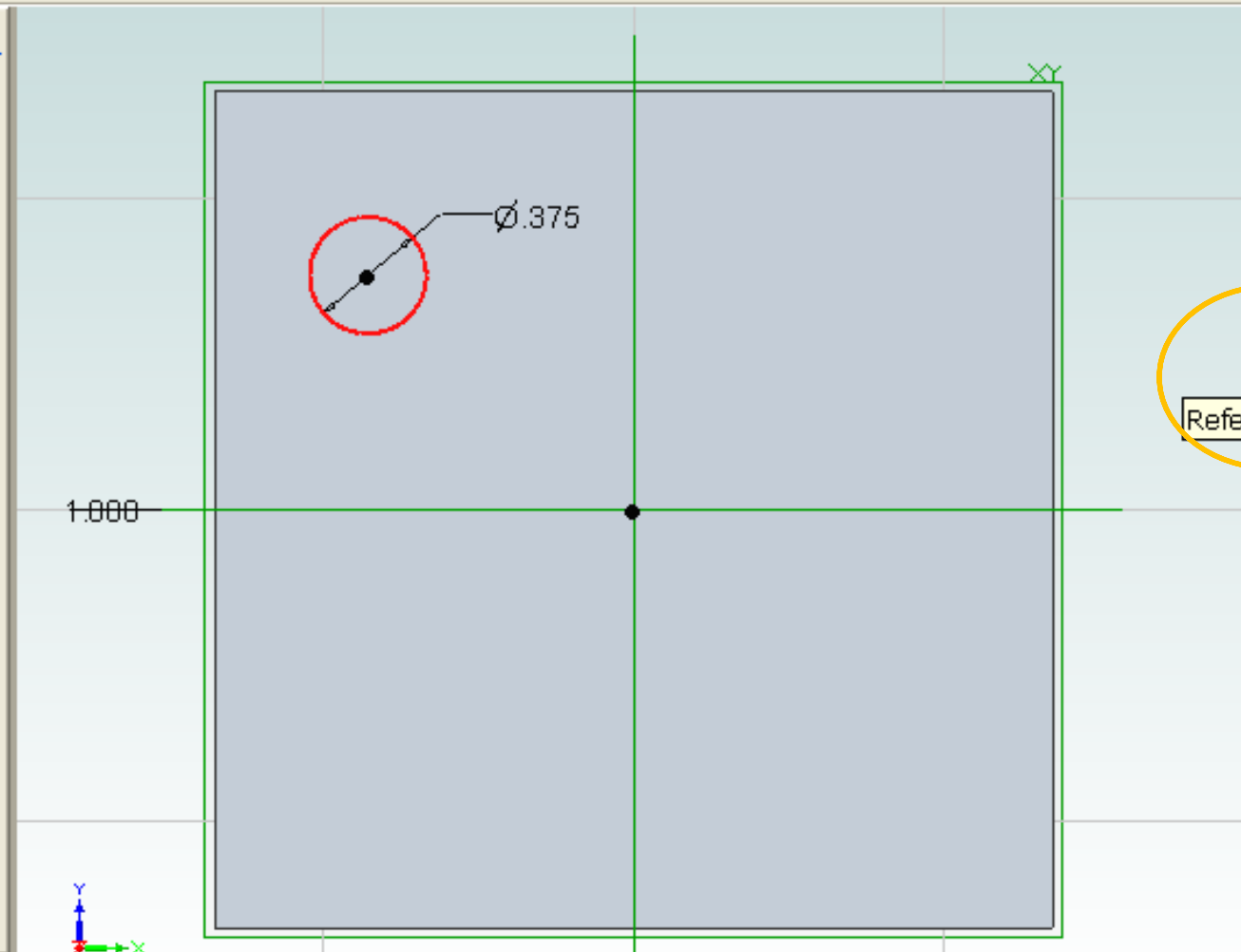


This vertical toolbar contains icons for sketching (Line, Circle, Arc, Rectangle, Polygon, Ellipse), editing (Move, Rotate, Scale, Mirror, Offset), and dimensioning (Dimension, Hide/Show, Lock/Unlock). The 'Dimension' icon is circled in yellow.

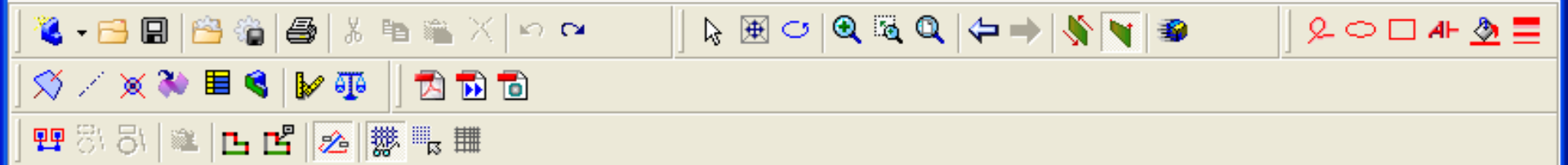


**Design Explorer**

- 10DegBlock
  - Configurations
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    - X-Axis
    - Y-Axis
    - Z-Axis
  - Planes
    - XY-Plane
    - YZ-Plane
    - ZX-Plane
  - Points
    - Origin
  - Surfaces
  - Redline Views
  - Section Views
  - Features
    - Extrusion<1>
      - Sketch<1>
    - Sketch<2>
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  - Faces
  - Vertices

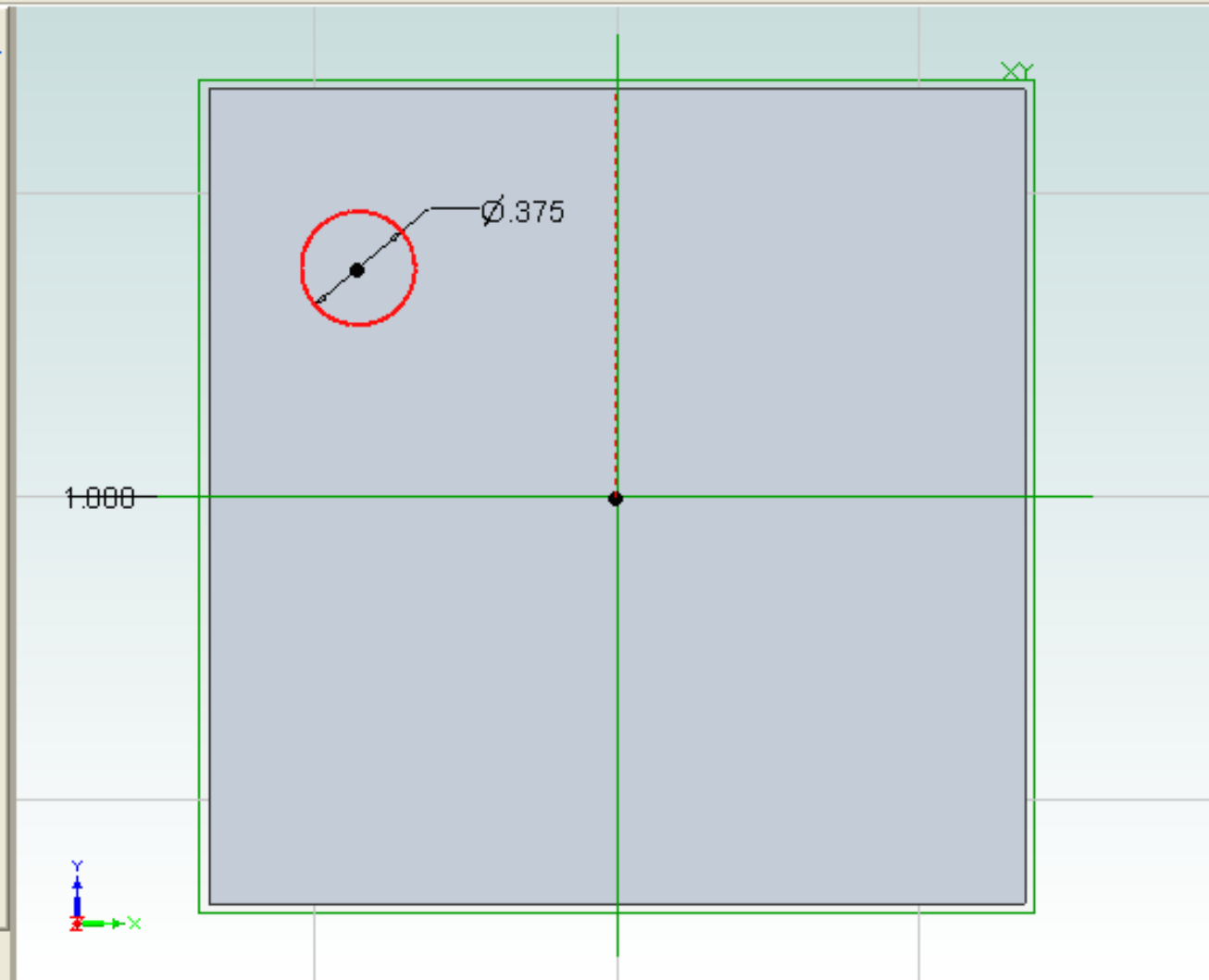


Reference Line

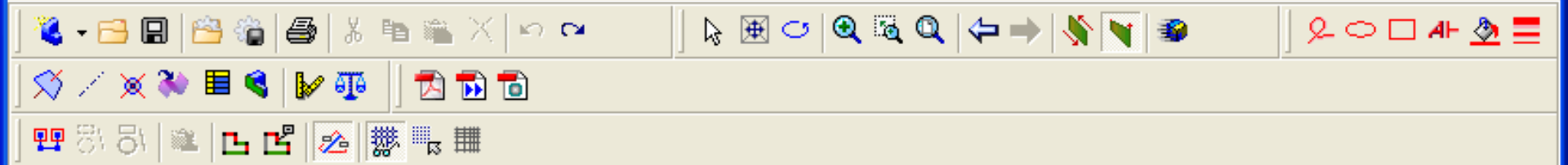


**Design Explorer**

- 10DegBlock
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    - Z-Axis
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  - Surfaces
  - Redline Views
  - Section Views
  - Features
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  - Faces
  - Vertices

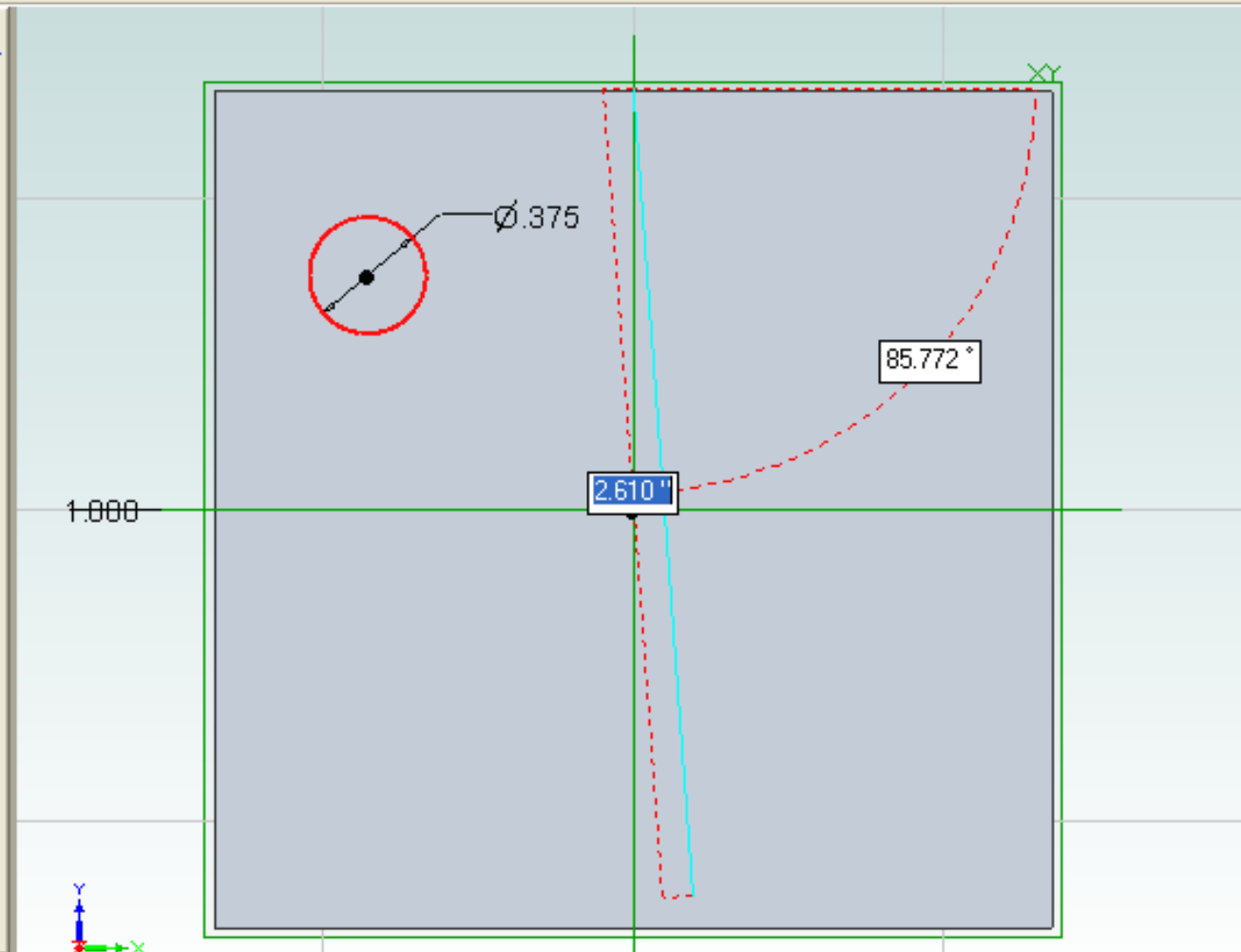


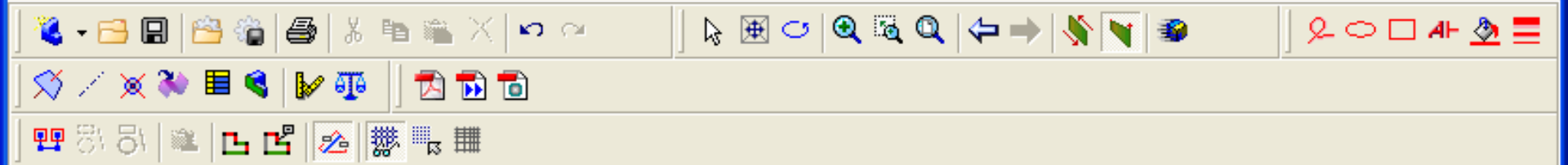
Pick start point.



**Design Explorer**

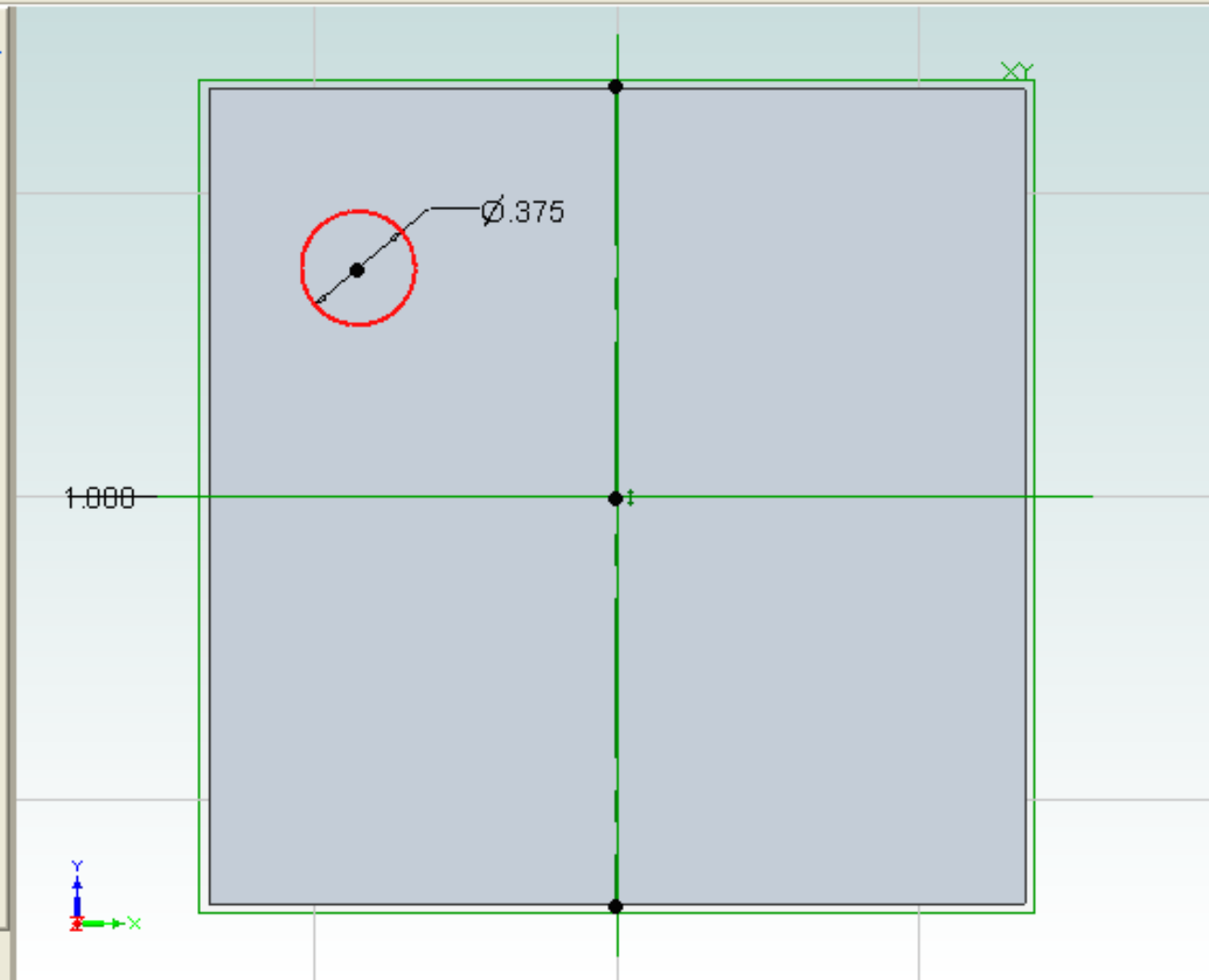
- 10DegBlock
  - Configurations
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    - Y-Axis
    - Z-Axis
  - Planes
    - XY-Plane
    - YZ-Plane
    - ZX-Plane
  - Points
    - Origin
  - Surfaces
  - Redline Views
  - Section Views
  - Features
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    - Sketch<1>
    - Sketch<2>
  - Edges
  - Faces
  - Vertices

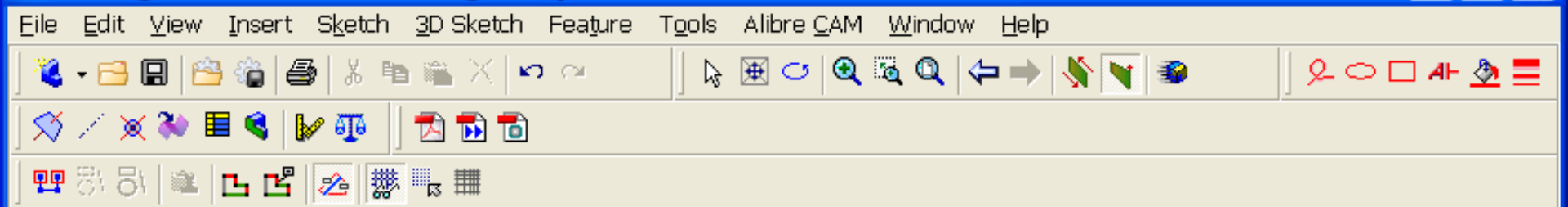




### Design Explorer

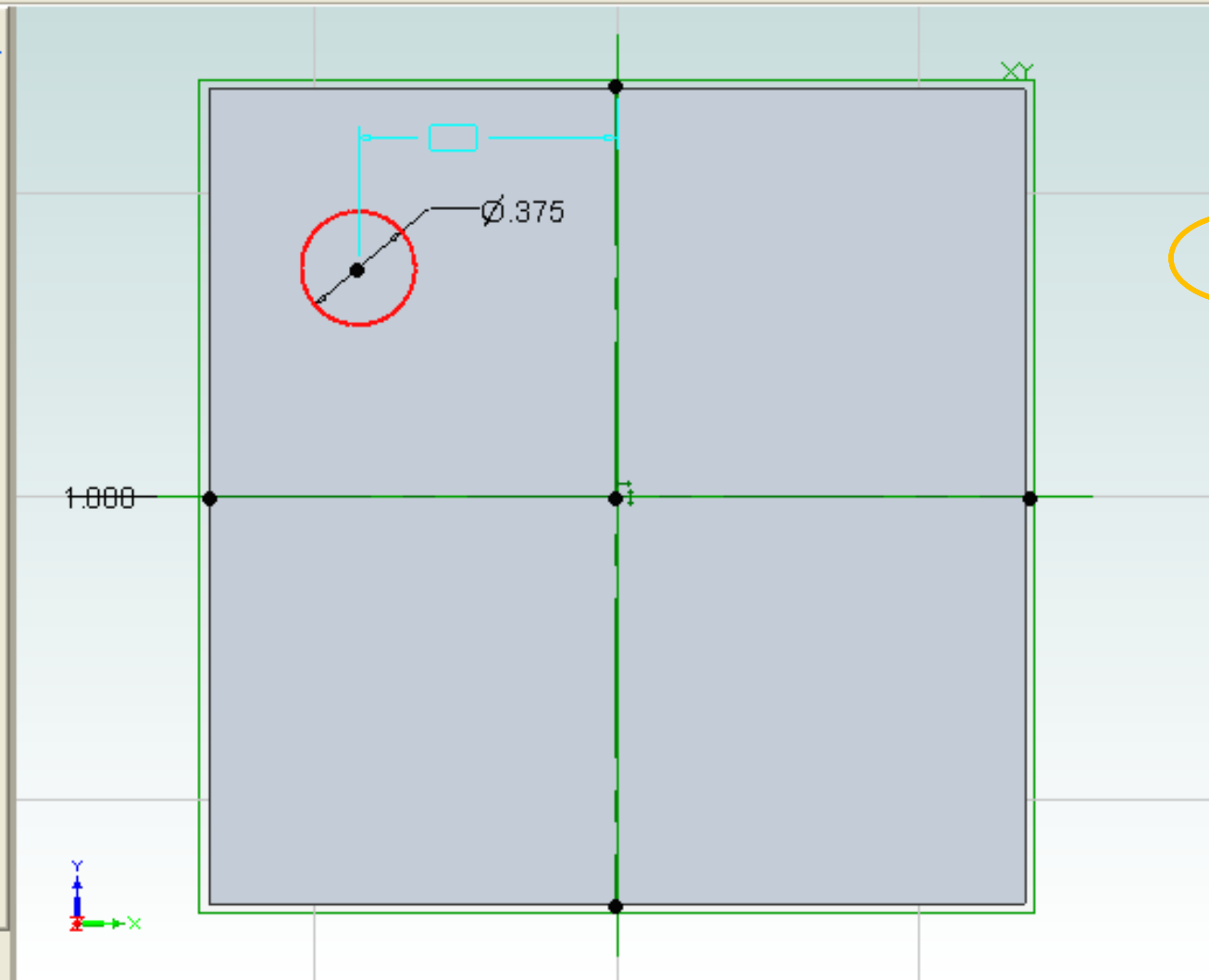
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    - Z-Axis
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  - Redline Views
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  - Edges
  - Faces
  - Vertices





### Design Explorer

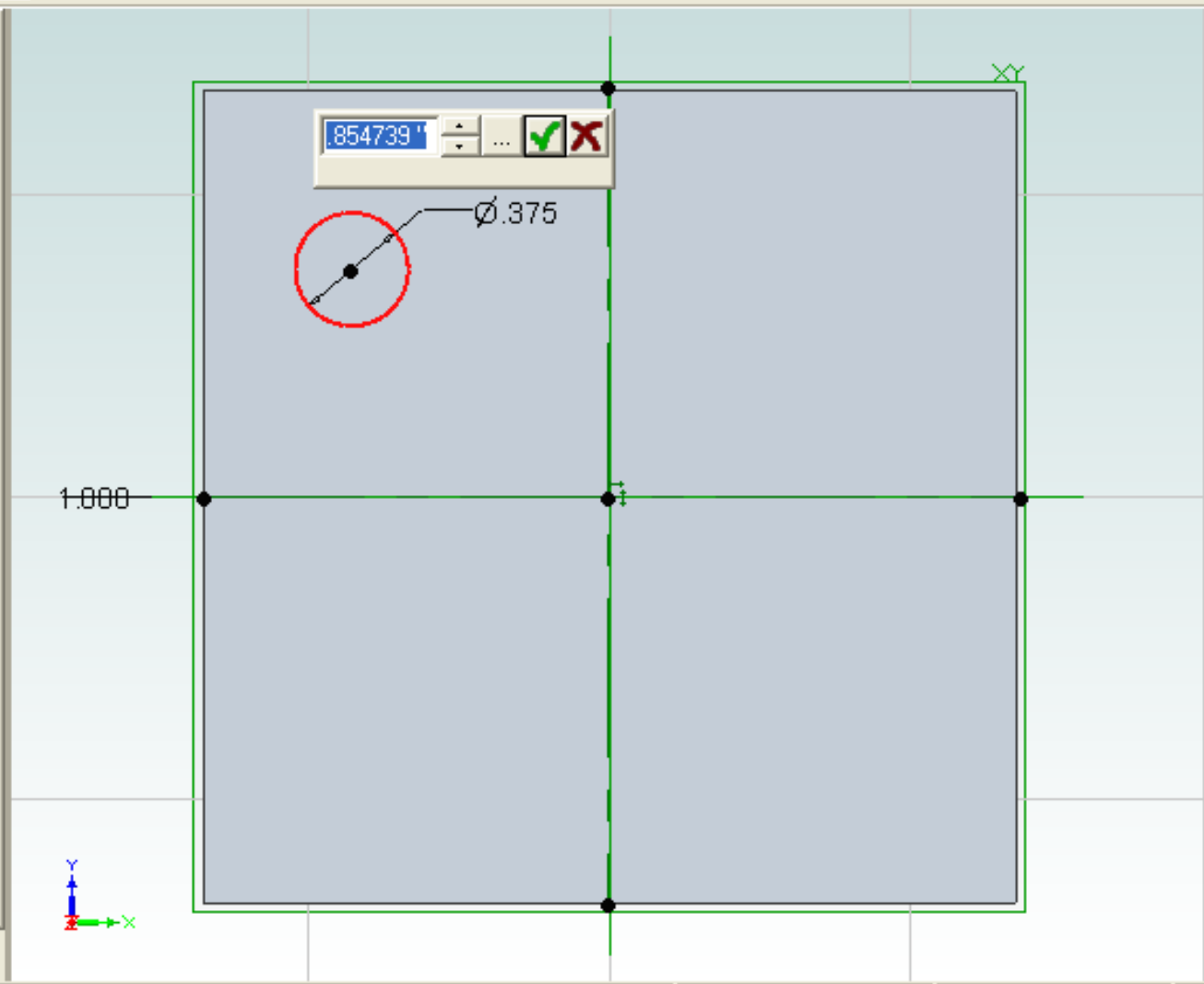
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  - Section Views
  - Features
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  - Faces
  - Vertices

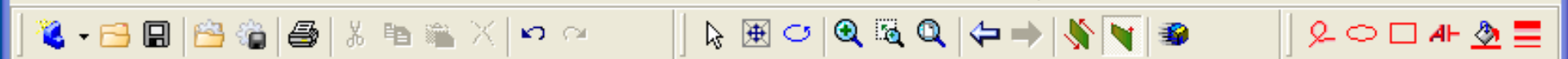




Design Explorer

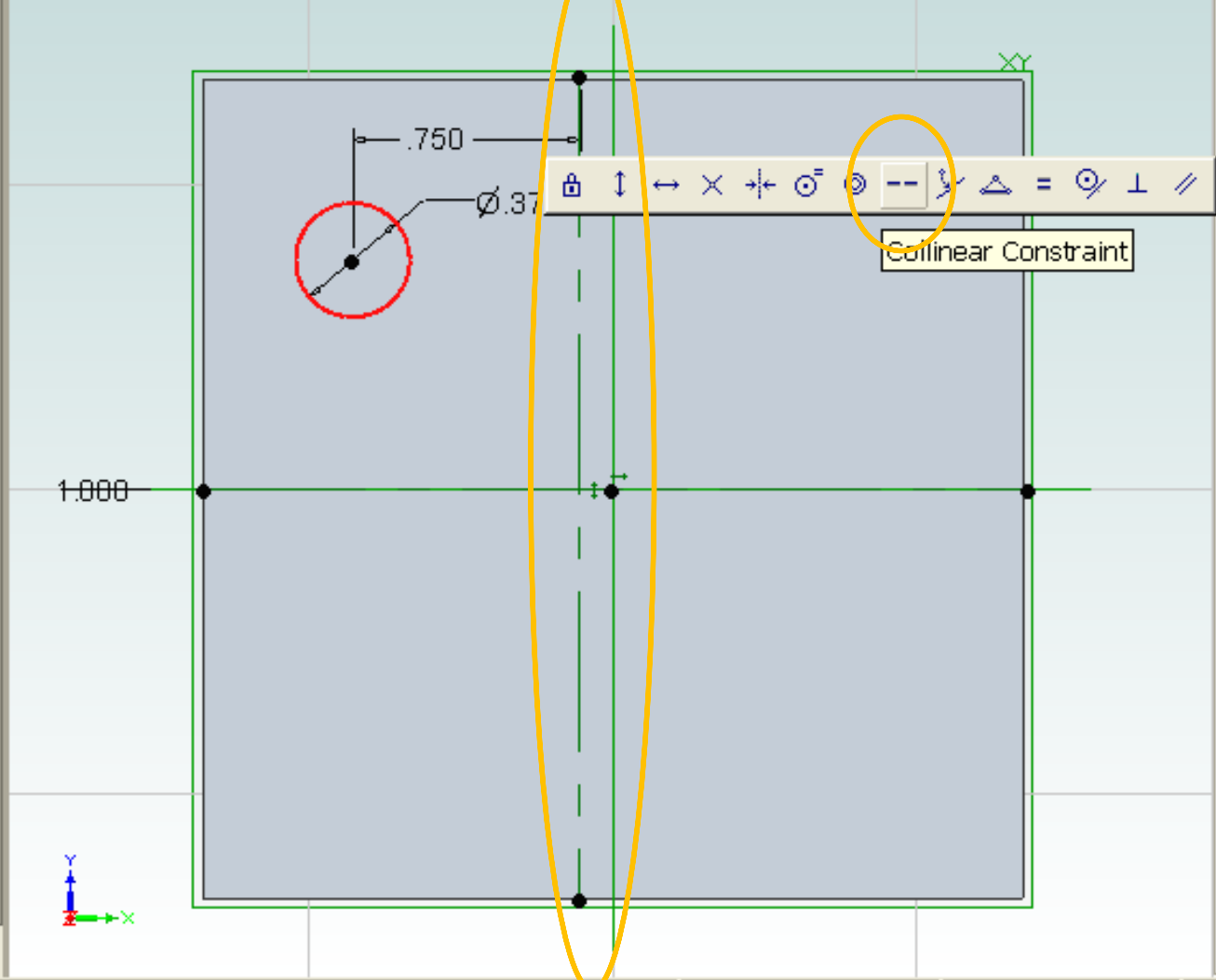
- 10DegBlock
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    - ZX-Plane
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  - Redline Views
  - Section Views
  - Features
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  - Edges
  - Faces
  - Vertices



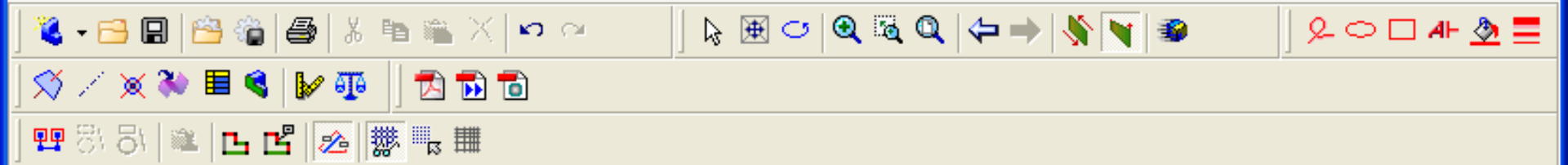


**Design Explorer**

- 10DegBlock
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    - YZ-Plane
    - ZX-Plane
  - Points
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  - Surfaces
  - Redline Views
  - Section Views
  - Features
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      - Sketch<1>
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  - Faces
  - Vertices

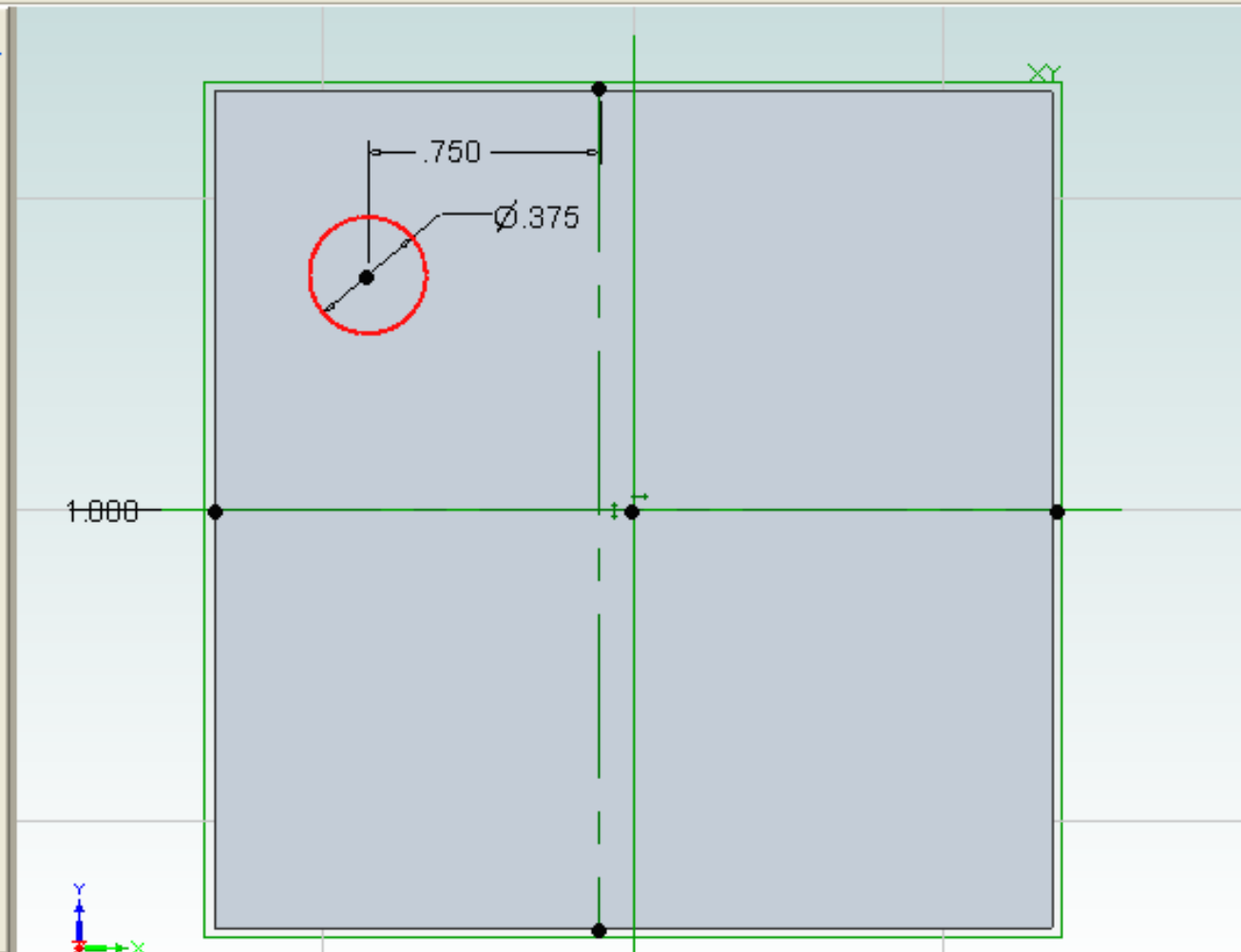




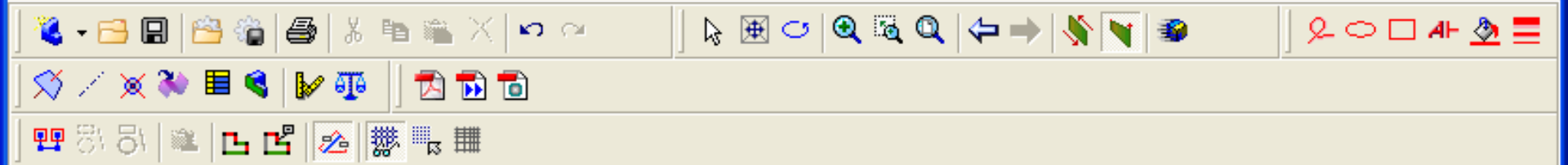


**Design Explorer**

- 10DegBlock
  - Configurations
    - Config<1>
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    - Y-Axis
    - Z-Axis
  - Planes
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    - YZ-Plane
    - ZX-Plane
  - Points
    - Origin
  - Surfaces
  - Redline Views
  - Section Views
  - Features
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      - Sketch<1>
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  - Edges
  - Faces
  - Vertices

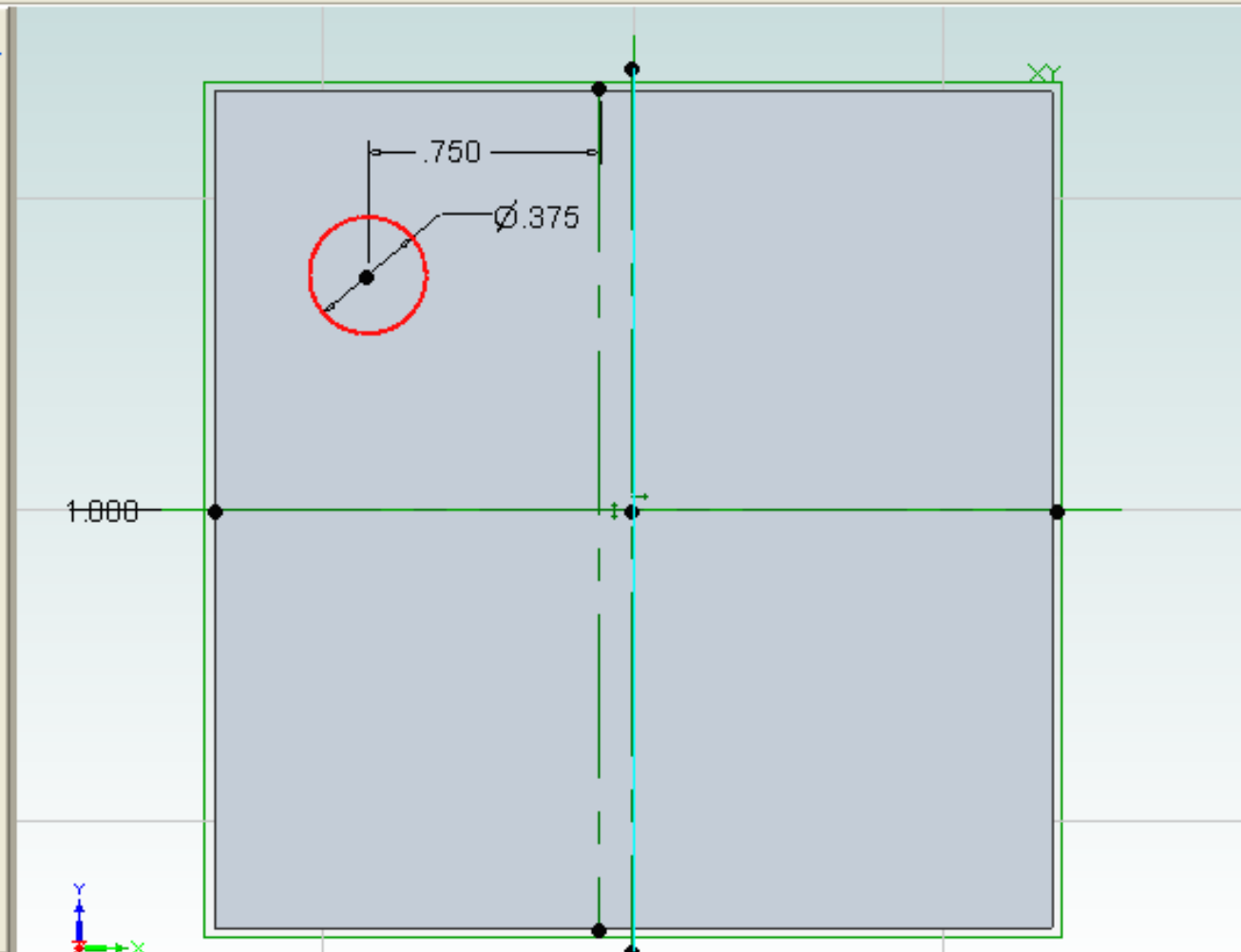


Select the FIRST line for the collinear constraint. Press ESC to cancel.

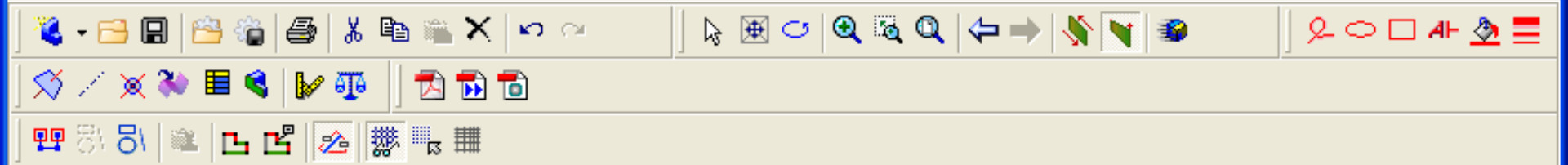


**Design Explorer**

- 10DegBlock
  - Configurations
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    - Y-Axis
    - Z-Axis
  - Planes
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    - YZ-Plane
    - ZX-Plane
  - Points
    - Origin
  - Surfaces
  - Redline Views
  - Section Views
  - Features
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  - Edges
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  - Vertices

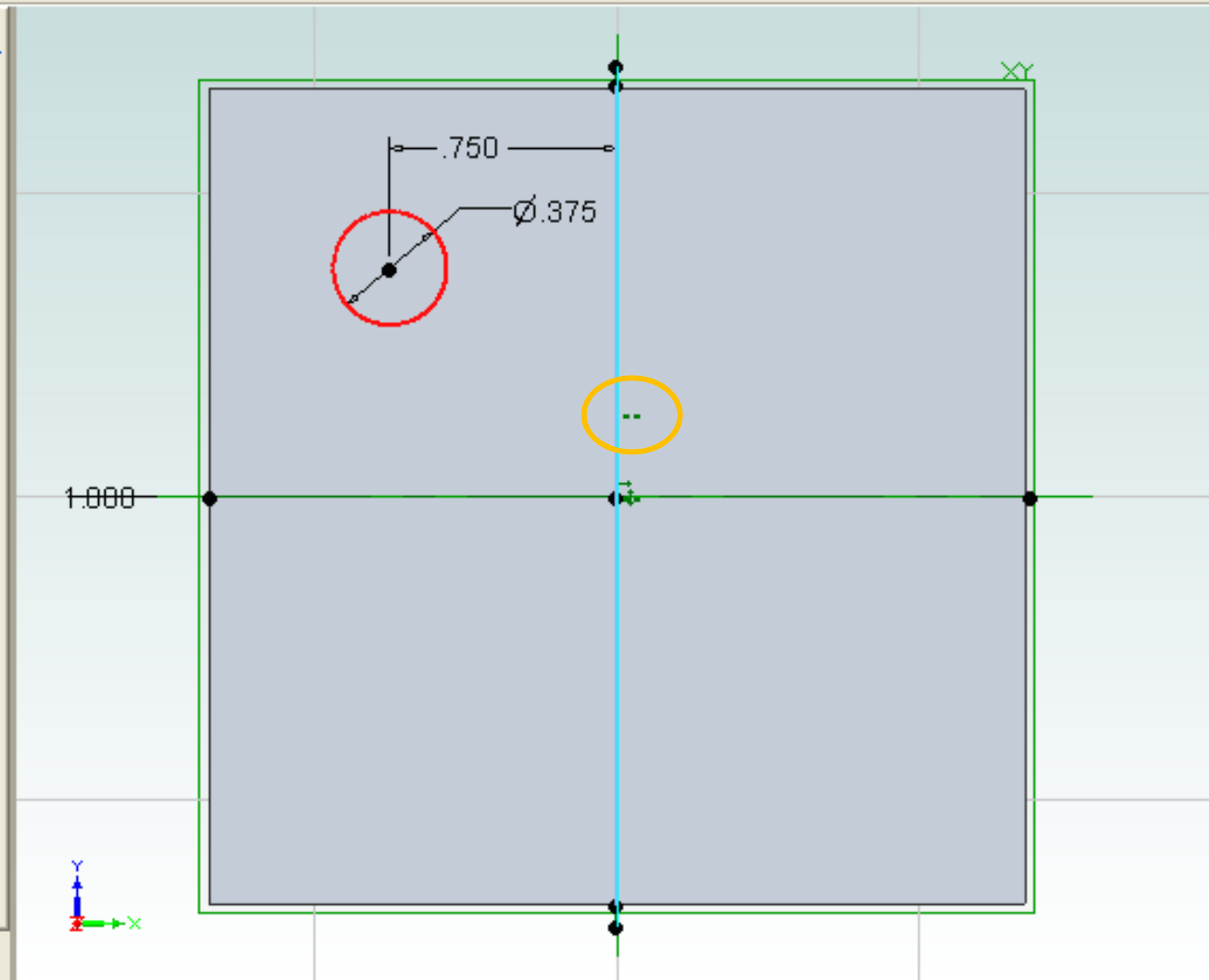


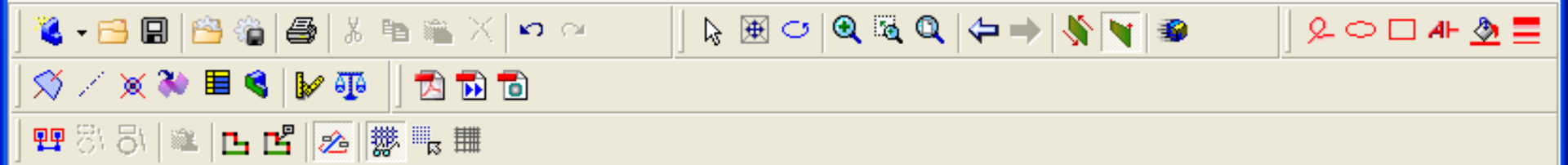
Select the SECOND line for the collinear constraint. Press ESC to cancel.



**Design Explorer**

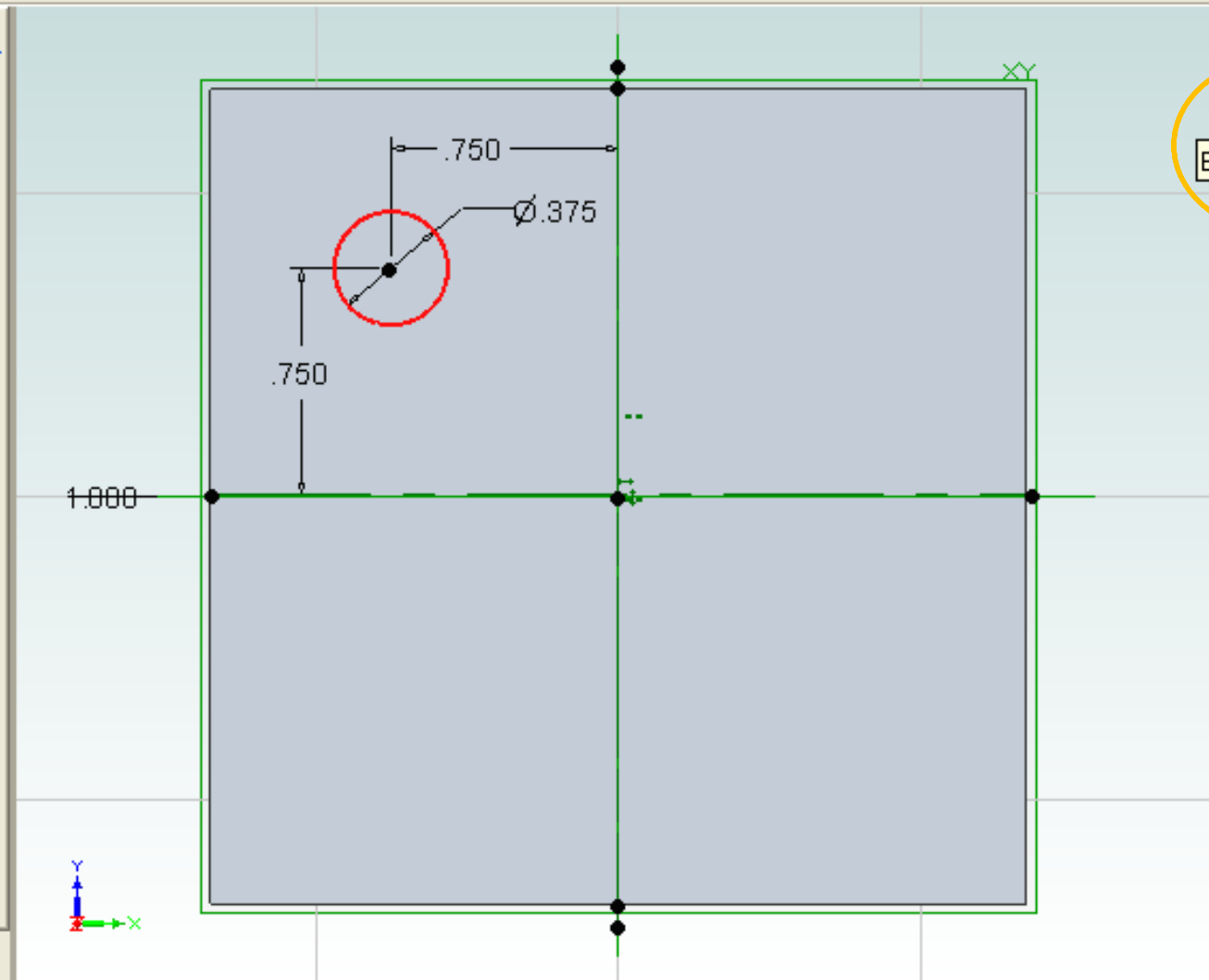
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    - Z-Axis
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    - YZ-Plane
    - ZX-Plane
  - Points
    - Origin
  - Surfaces
  - Redline Views
  - Section Views
  - Features
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  - Edges
  - Faces
  - Vertices

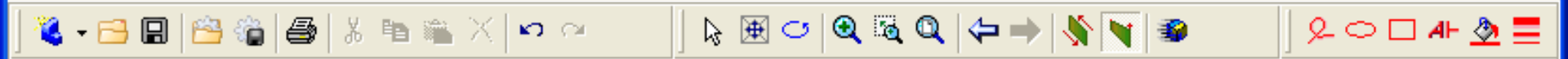




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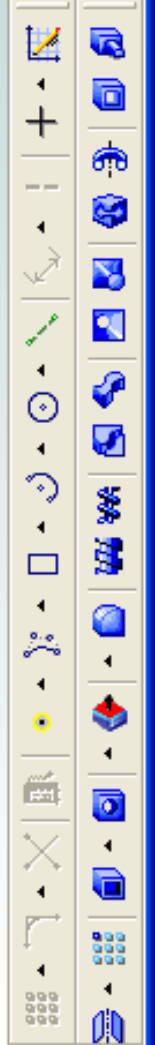
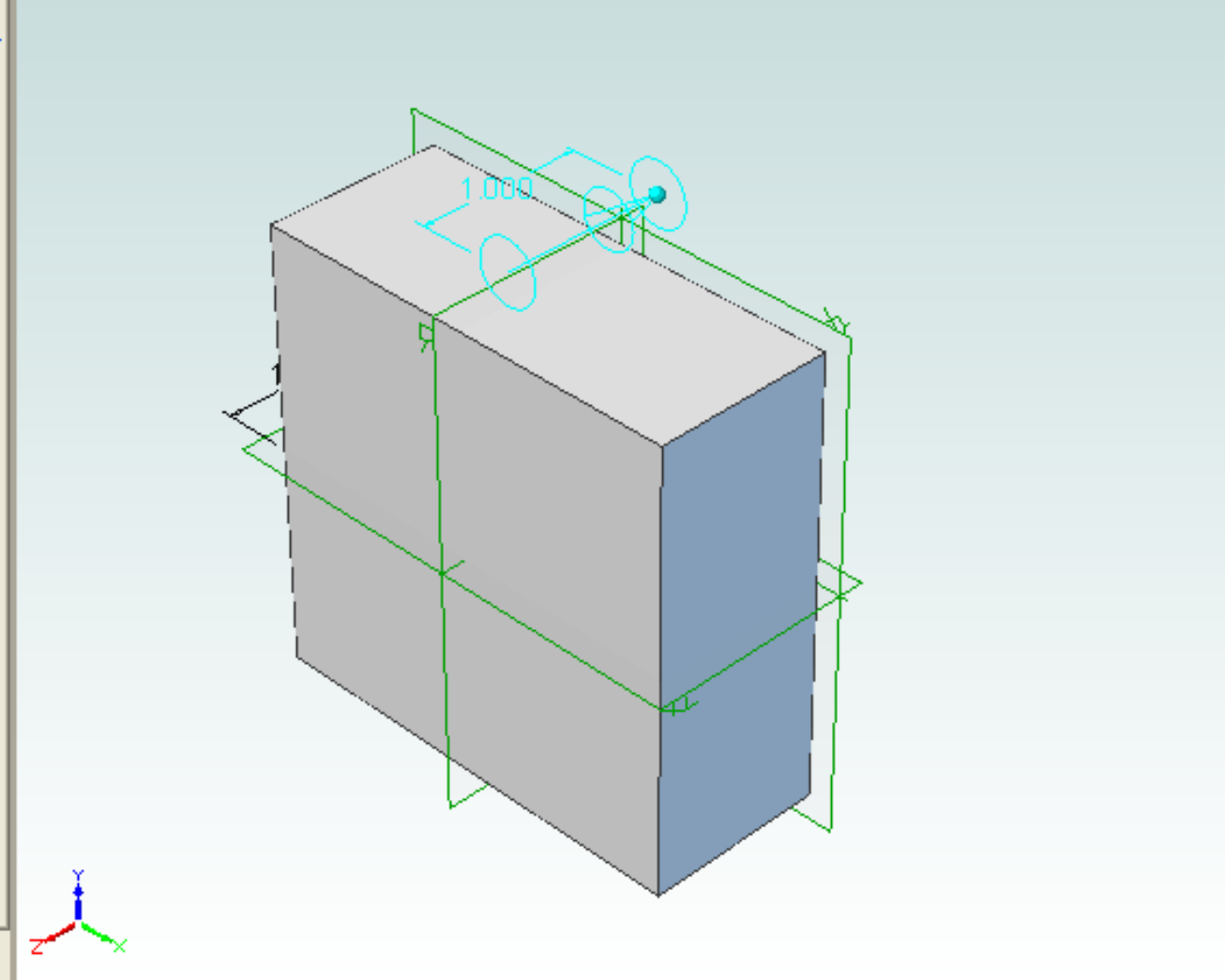
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  - Surfaces
  - Redline Views
  - Section Views
  - Features
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  - Edges
  - Faces
  - Vertices





**Design Explorer**

- 10DegBlock
  - Configurations
    - Config<1>
  - Axes
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  - Redline Views
  - Section Views
  - Features
    - Extrusion<1>
      - Sketch<1>
      - Sketch<2>
  - Edges
  - Faces
  - Vertices





# Extrude Cut



Sketch

Sketch<2>

Direction

Along Normal

Select

Draft Angle

0

Outward

Type:

To Depth

To Depth

Through ALL

Mid Plane

To Next

To Geometry

To Geometry

Target:

Offset:

.000"

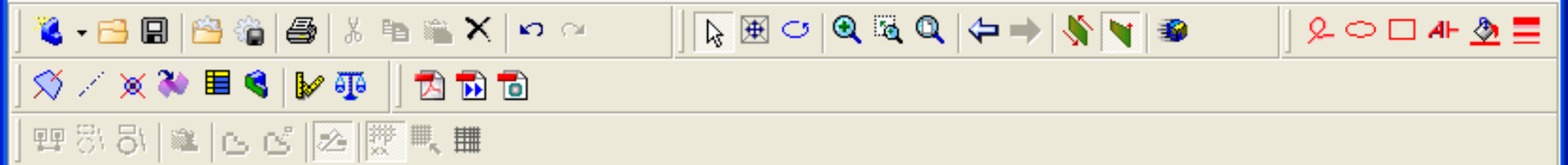
Label:

Extrusion<2>

OK

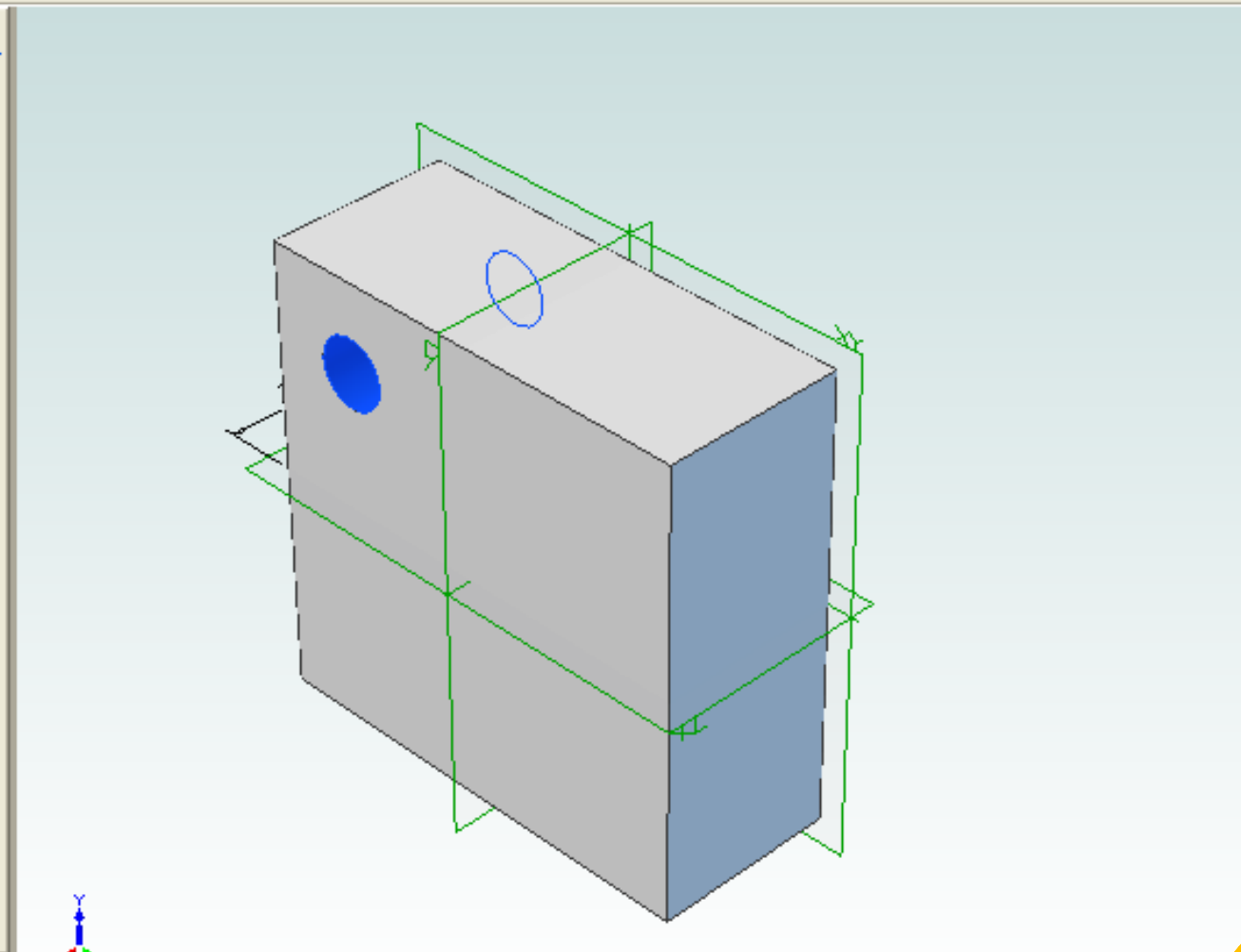
Cancel

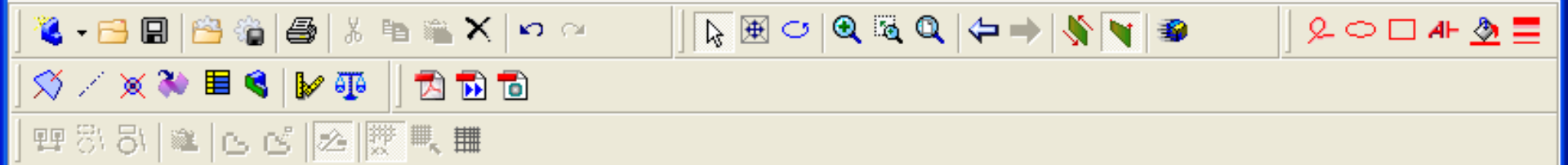




### Design Explorer

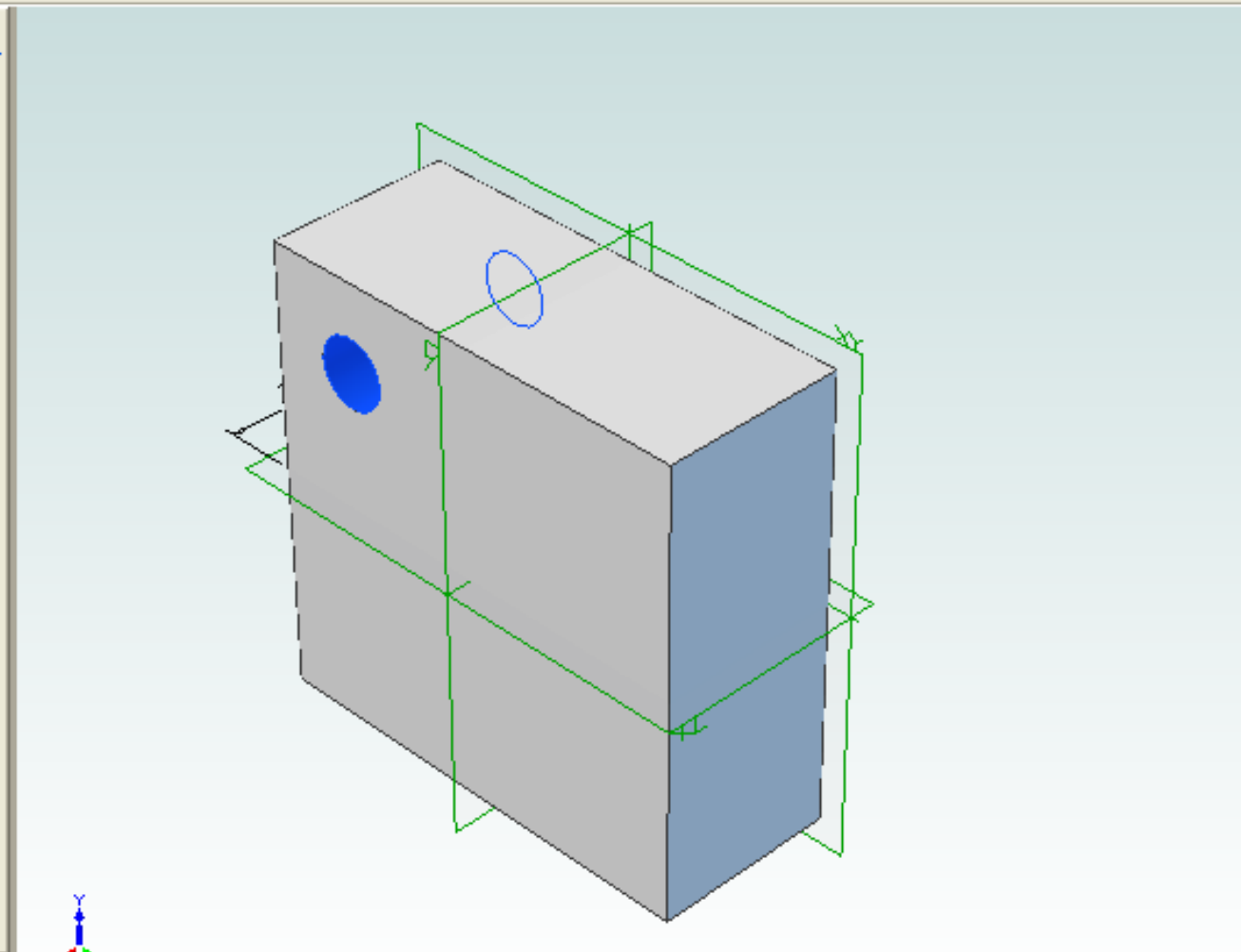
- 10DegBlock
  - Configurations
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    - ZX-Plane
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    - Origin
  - Surfaces
  - Redline Views
  - Section Views
  - Features
    - Extrusion<1>
      - Sketch<1>
    - Extrusion<2>
      - Sketch<2>
  - Edges
  - Faces
  - Vertices





**Design Explorer**

- 10DegBlock
  - Configurations
    - Config<1>
  - Axes
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  - Redline Views
  - Section Views
  - Features
    - Extrusion<1>
      - Sketch<1>
    - Extrusion<2>
      - Sketch<2>
  - Edges
  - Faces
  - Vertices



Mirrors the selected features





# Feature Mirror



Features to Mirror:

Mirror Geometry

Mirror Plane:

Label:

Mirror<3>

OK

Cancel





# Feature Mirror



Features to Mirror:

Mirror Geometry

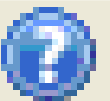
**Mirror Plane:**

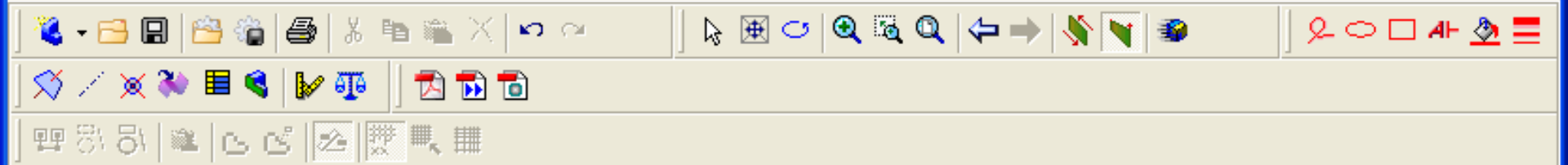
Label:

Mirror<3>

OK

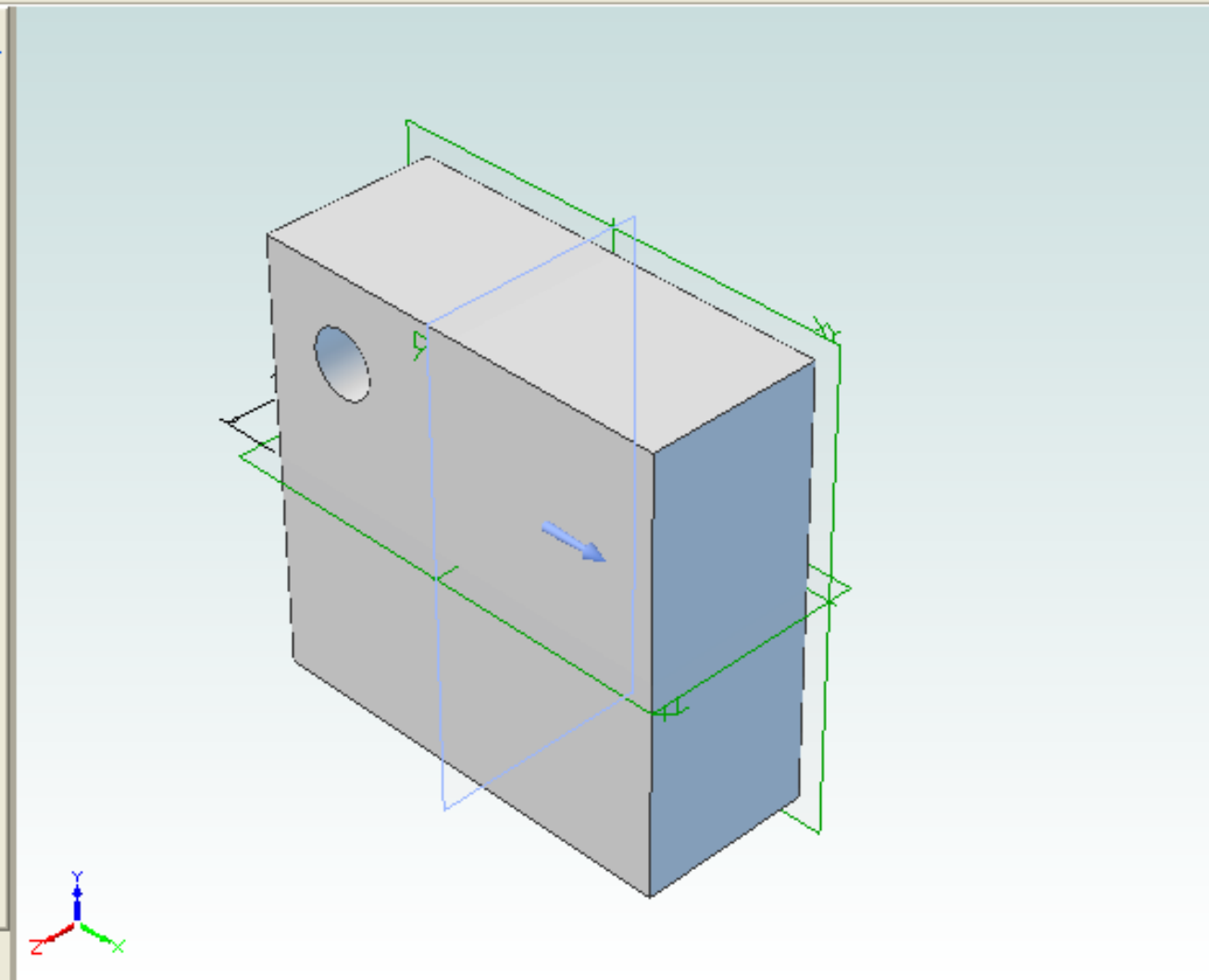
Cancel





### Design Explorer

- 10DegBlock
  - Configurations
    - Config<1>
  - Axes
    - X-Axis
    - Y-Axis
    - Z-Axis
  - Planes
    - XY-Plane
    - YZ-Plane**
    - ZX-Plane
  - Points
    - Origin
  - Surfaces
  - Redline Views
  - Section Views
  - Features
    - Extrusion<1>
      - Sketch<1>
    - Extrusion<2>
      - Sketch<2>
  - Edges
  - Faces
  - Vertices





# Feature Mirror



Features to Mirror:



Mirror Geometry

Mirror Plane:

YZ-Plane

Label:

Mirror<3>





# Feature Mirror



Features to Mirror:

Mirror Geometry

Mirror Plane:

YZ-Plane

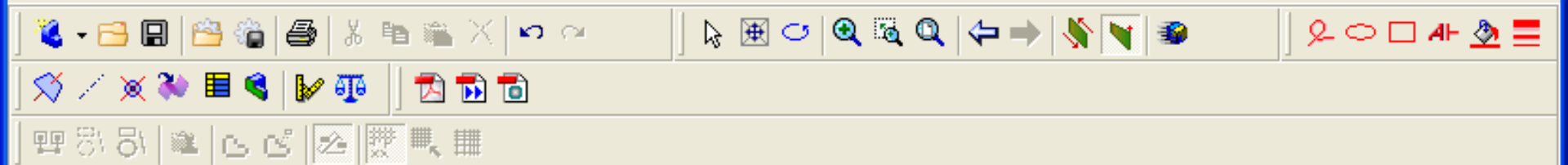
Label:

Mirror<3>

OK

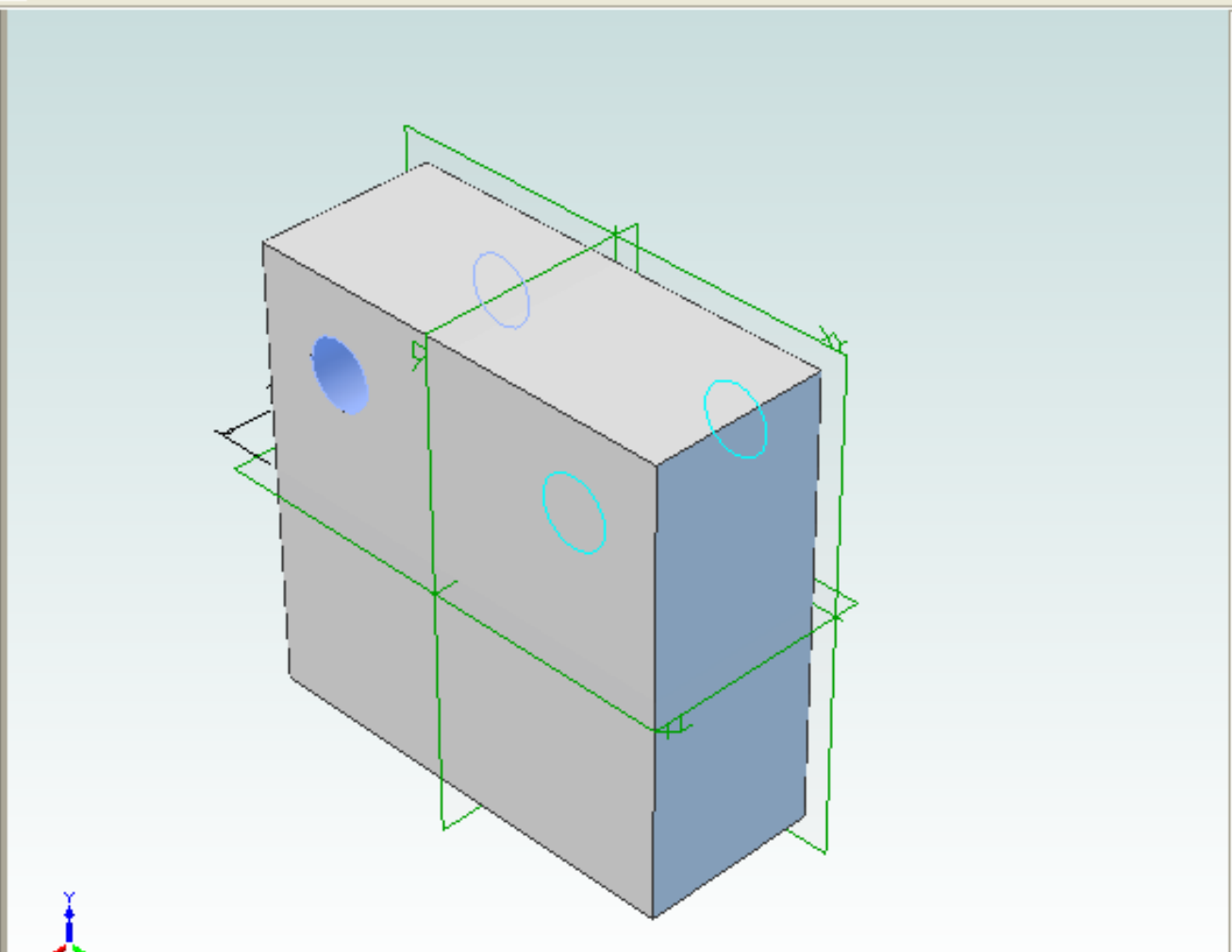
Cancel





**Design Explorer**

- 10DegBlock
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    - Config<1>
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    - XY-Plane
    - YZ-Plane**
    - ZX-Plane
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  - Redline Views
  - Section Views
  - Features
    - Extrusion<1>
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  - Faces
  - Vertices






# Feature Mirror



Features to Mirror:

Mirror Geometry

-  Extrusion<2>

Mirror Plane:

YZ-Plane

Label:

Mirror<3>

OK

Cancel









# Feature Mirror



Features to Mirror:

Mirror Geometry

 Extrusion<2>

 Mirror<3>

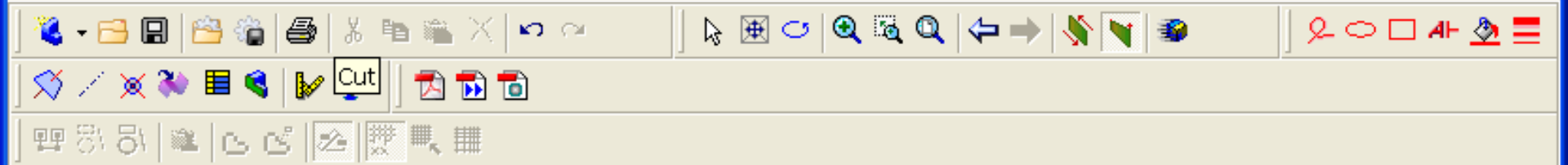
Mirror Plane:

Label:

OK

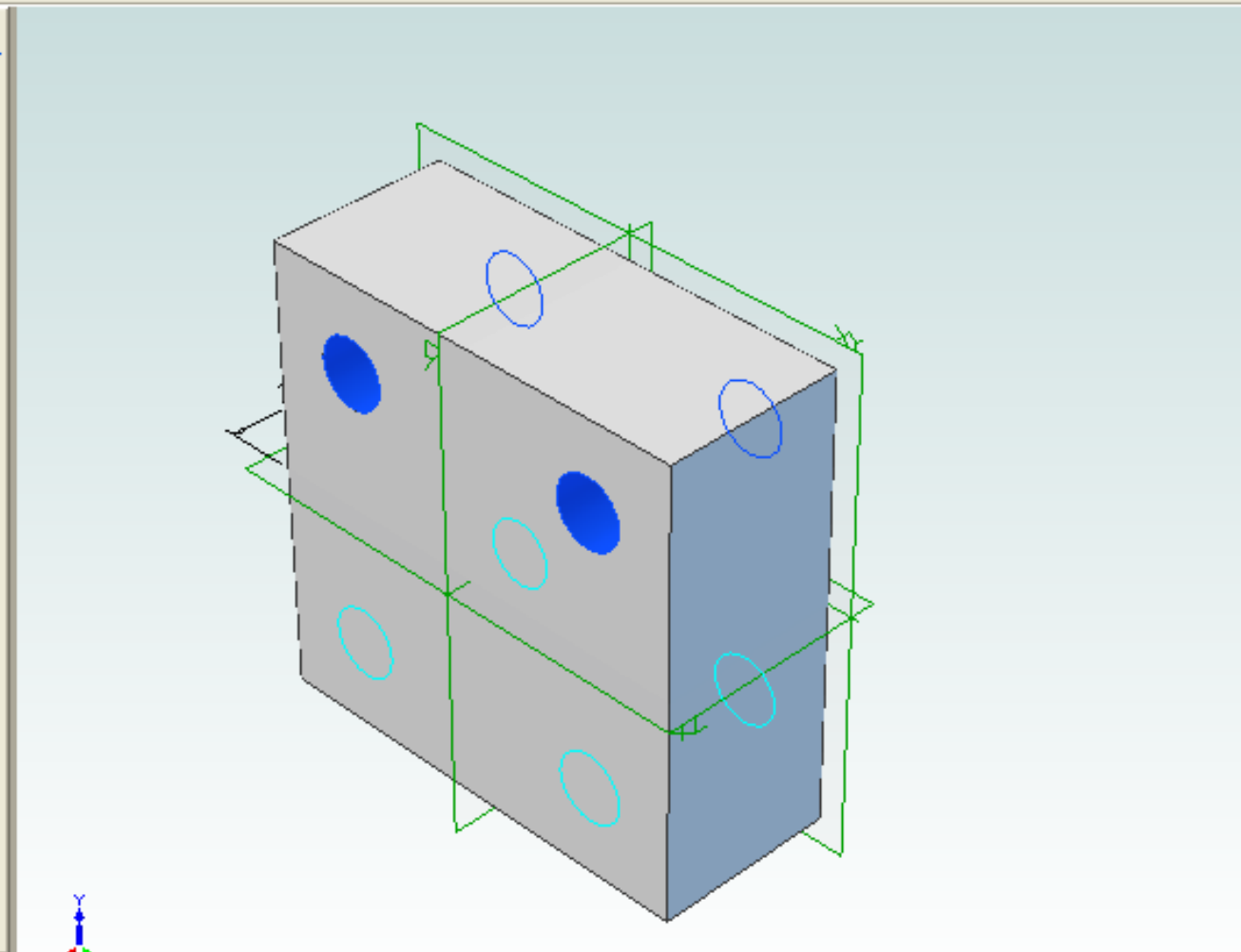
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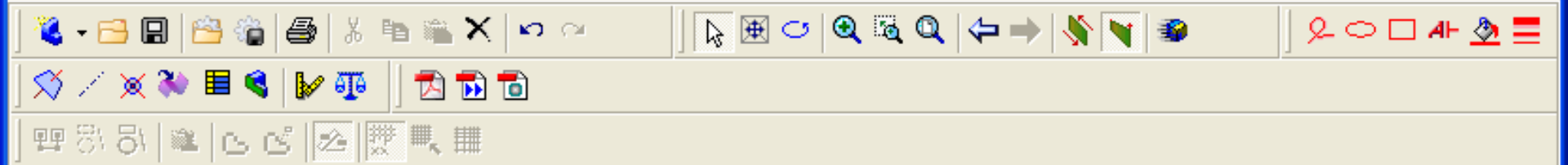




**Design Explorer**

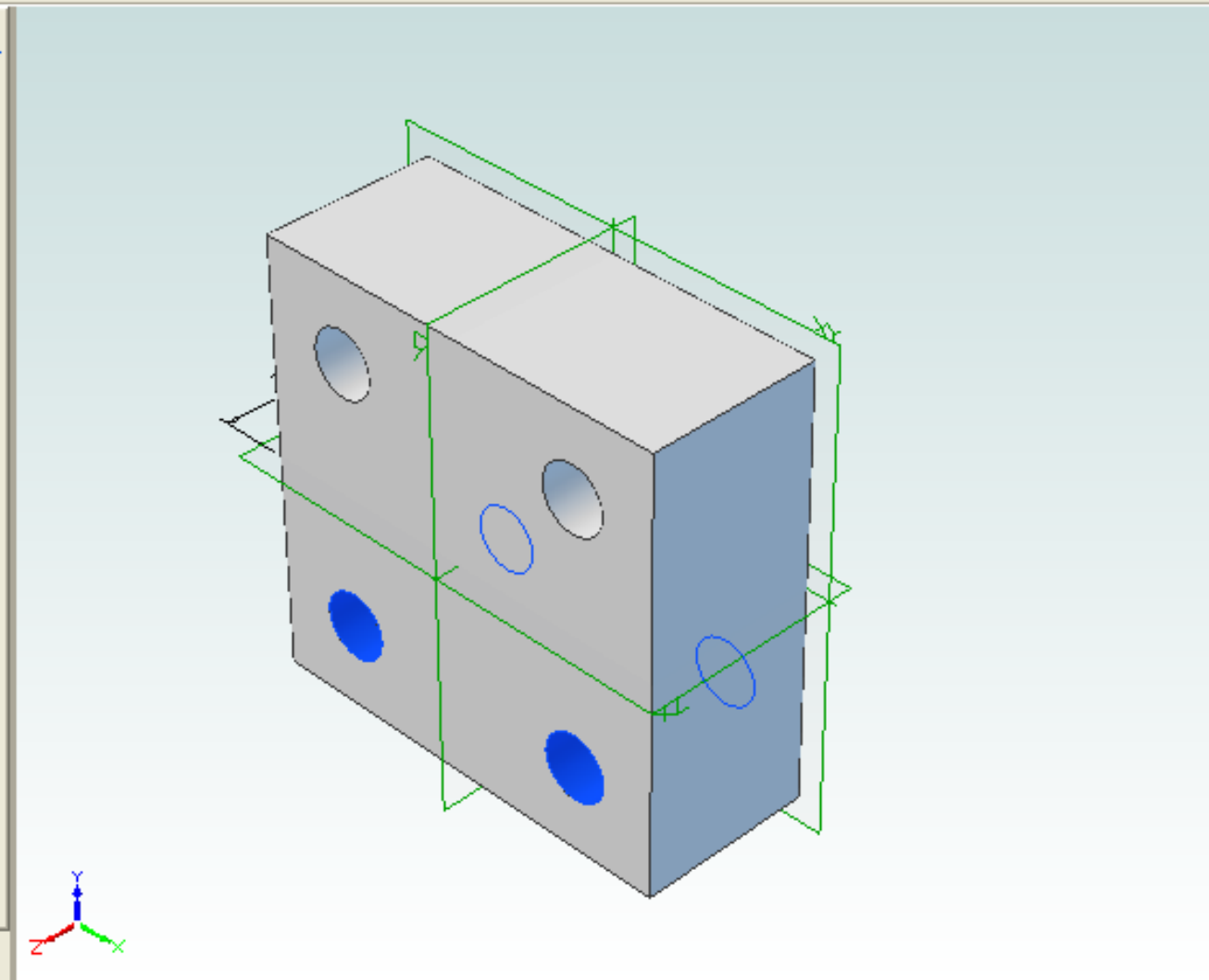
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    - Z-Axis
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    - YZ-Plane
    - ZX-Plane
  - Points
    - Origin
  - Surfaces
  - Redline Views
  - Section Views
  - Features
    - Extrusion<1>
      - Sketch<1>
    - Extrusion<2>
      - Sketch<2>
    - Mirror<3>
  - Edges
  - Faces





**Design Explorer**

- 10DegBlock
  - Configurations
    - Config<1>
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    - Y-Axis
    - Z-Axis
  - Planes
    - XY-Plane
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    - Origin
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  - Redline Views
  - Section Views
  - Features
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    - Mirror<4>
  - Edges

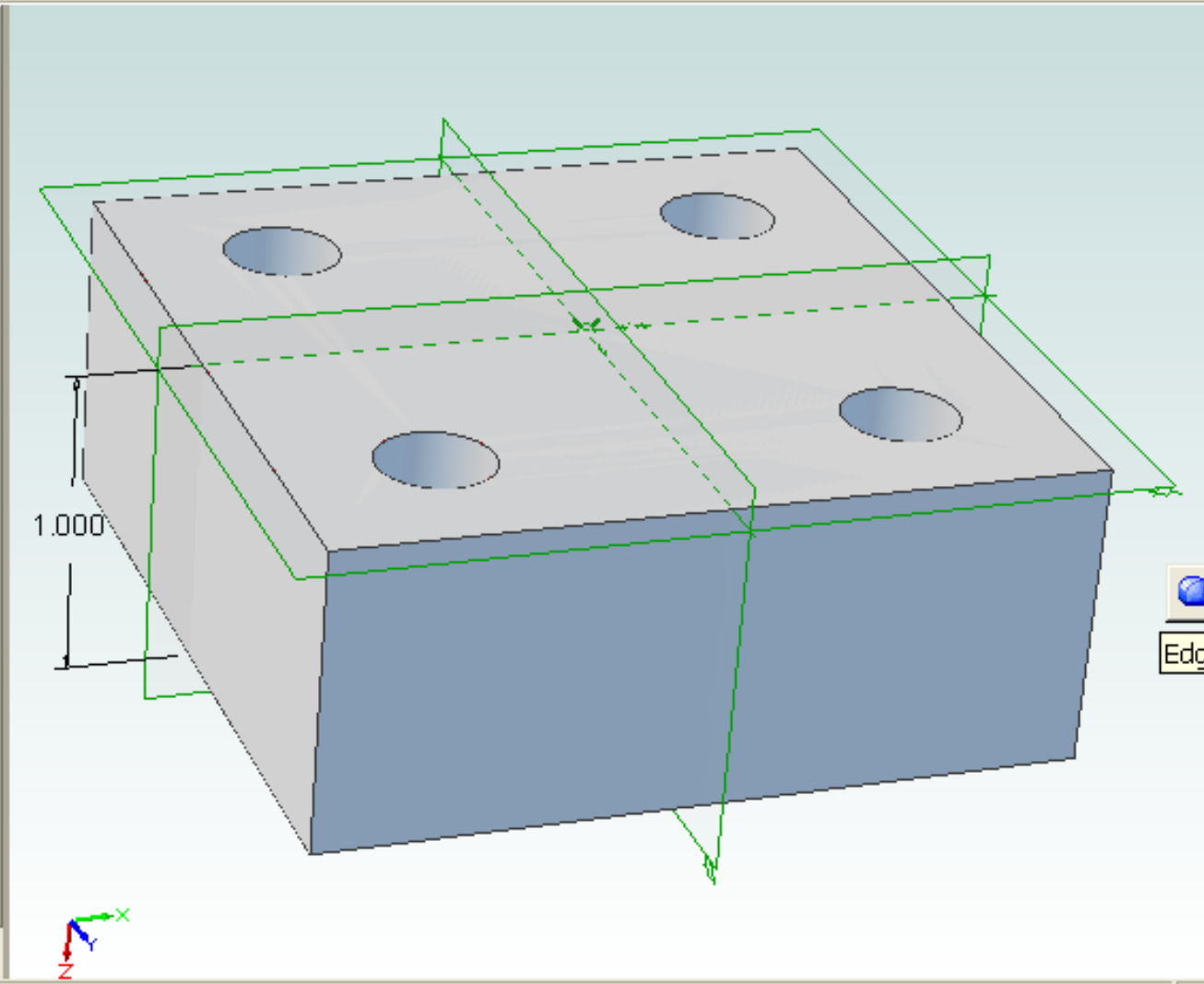






**Design Explorer**

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    - YZ-Plane
    - ZX-Plane
  - Points
    - Origin
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  - Redline Views
  - Section Views
  - Features
    - Extrusion<1>
      - Sketch<1>
    - Extrusion<2>
      - Sketch<2>
    - Mirror<3>
    - Mirror<4>
  - Edges



Edge Chamfer



# Chamfer Edge



Edges/Faces to Chamfer:

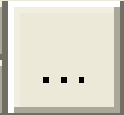
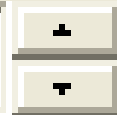
Chamfer Type

Equal distance



Distance:

.250 "



Tangent Propagate

Label:

Edge Chamfer<5>

OK

Cancel





# Chamfer Edge



Edges/Faces to Chamfer:

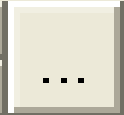
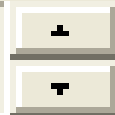
Chamfer Type

Equal distance



**Distance:**

0.050 "



Tangent Propagate

Label:

Edge Chamfer<5>

OK

Cancel





# Chamfer Edge



**Edges/Faces to Chamfer:**



Chamfer Type

Equal distance



Distance:

.050 "



Tangent Propagate

Label:

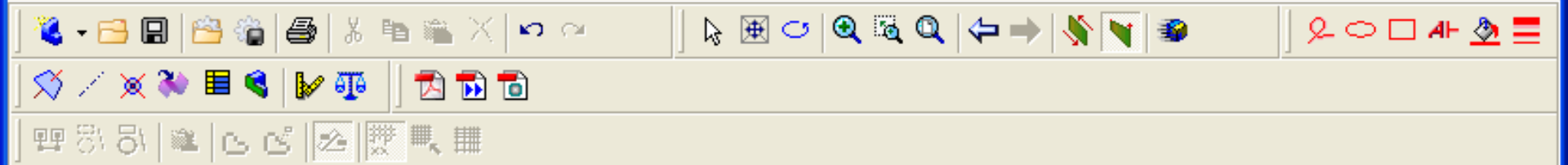
Edge Chamfer<5>

OK

Cancel

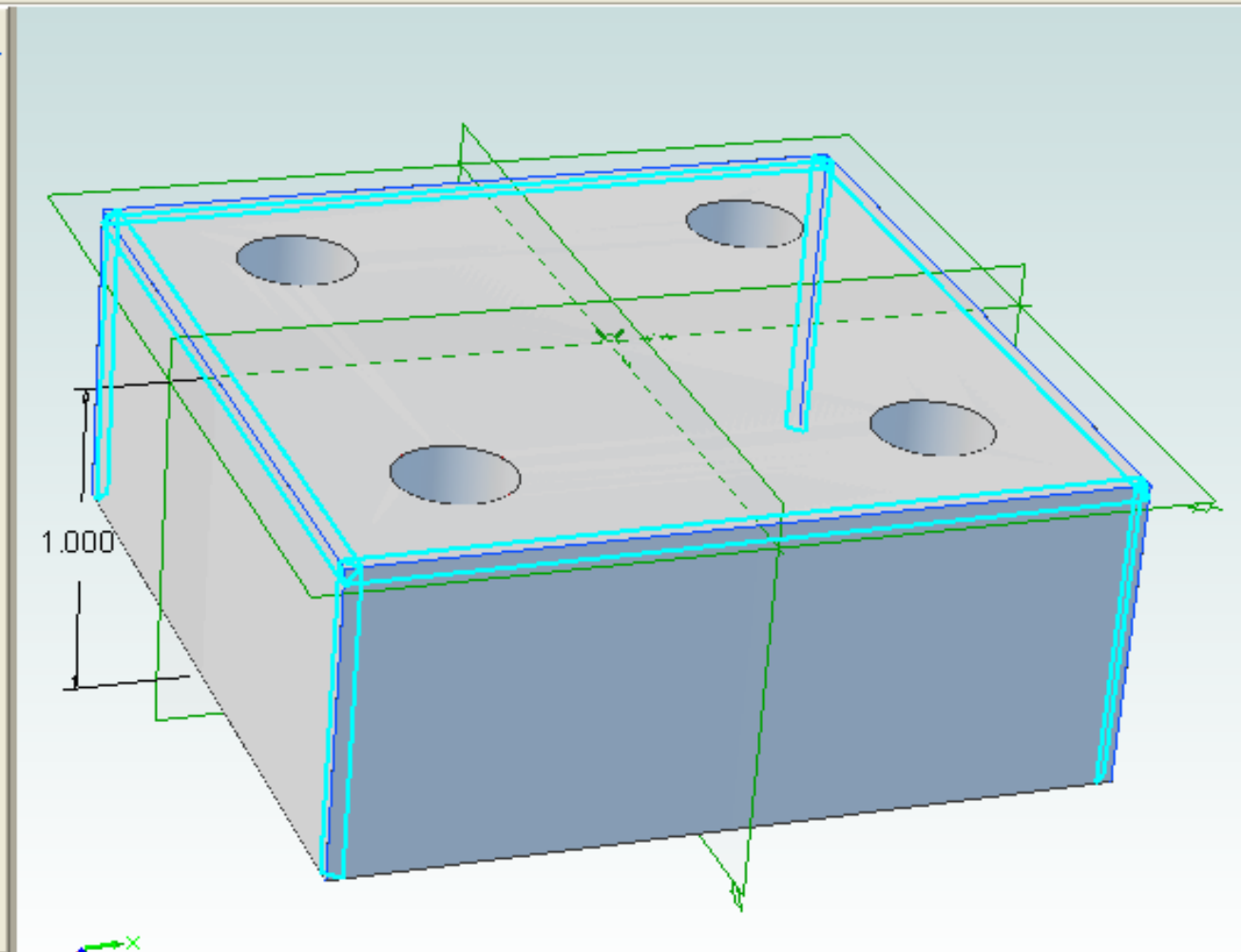






**Design Explorer**

- Mirror<4>
- Edges
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  - Edge<2>
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  - Edge<7>
  - Edge<8>
  - Edge<9>
  - Edge<10>
  - Edge<11>
  - Edge<12>
  - Edge<13>
  - Edge<14>
  - Edge<15>
  - Edge<16>
  - Edge<17>
  - Edge<18>
  - Edge<19>
  - Edge<20>
- Faces
- Vertices












# Chamfer Edge



Edges/Faces to Chamfer:

-  Edge<14>
-  Edge<17>
-  Edge<12>
-  Edge<10>
-  Edge<18>
-  Edge<20>
-  Edge<11>
-  Edge<15>

Chamfer Type

Equal distance

Distance:

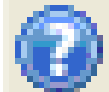
.050 "

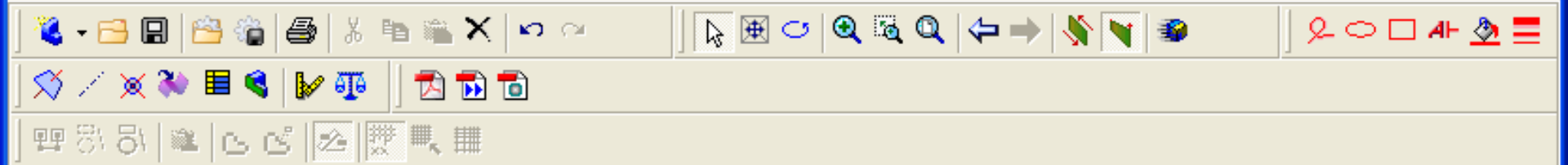
Tangent Propagate

Label: Edge Chamfer<5>

OK

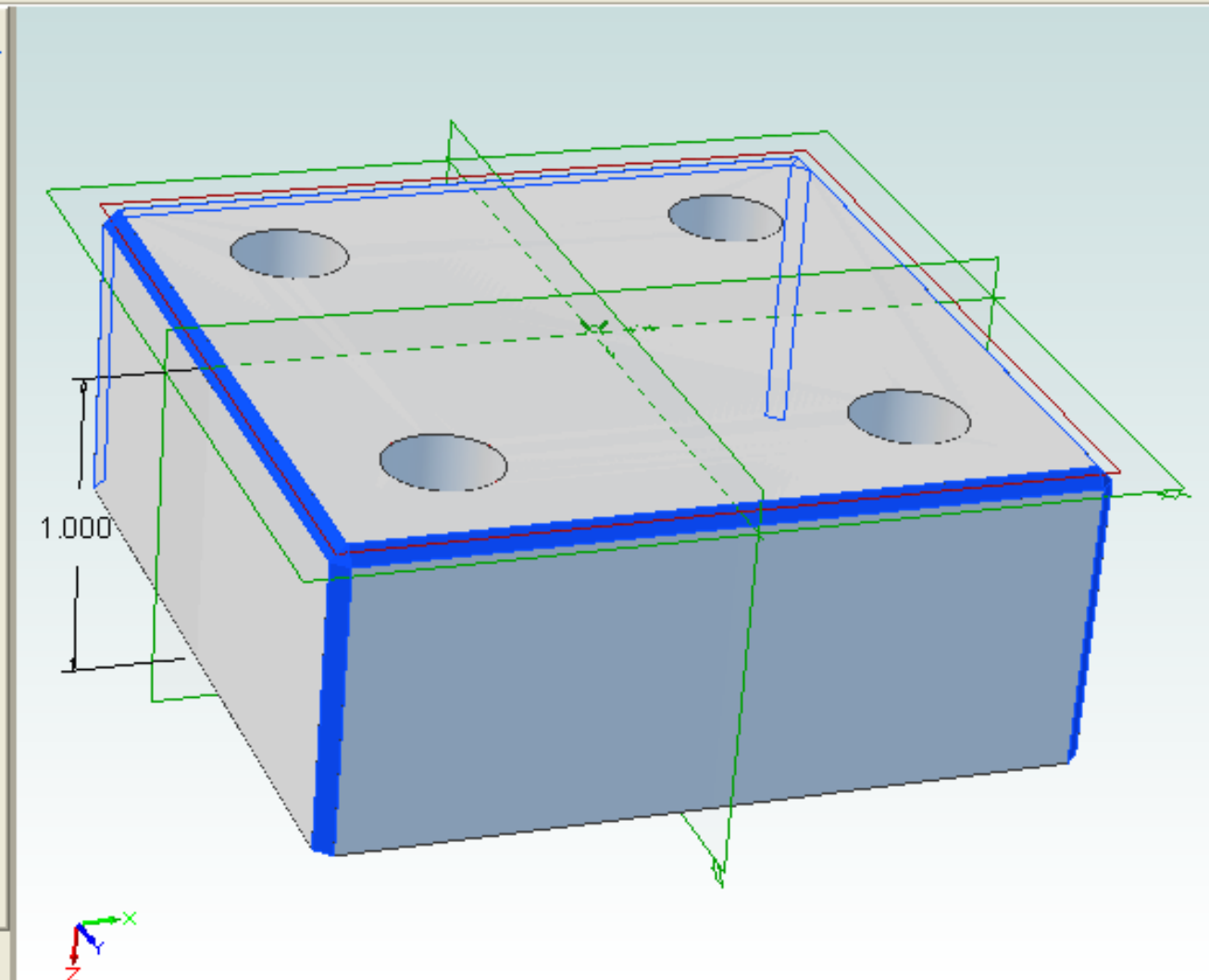
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**Design Explorer**

- Mirror<4>
- Edge Chamfer<5>
- Edges
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  - Edge<2>
  - Edge<3>
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  - Edge<12>
  - Edge<13>
  - Edge<14>
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  - Edge<17>
  - Edge<18>
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  - Edge<21>

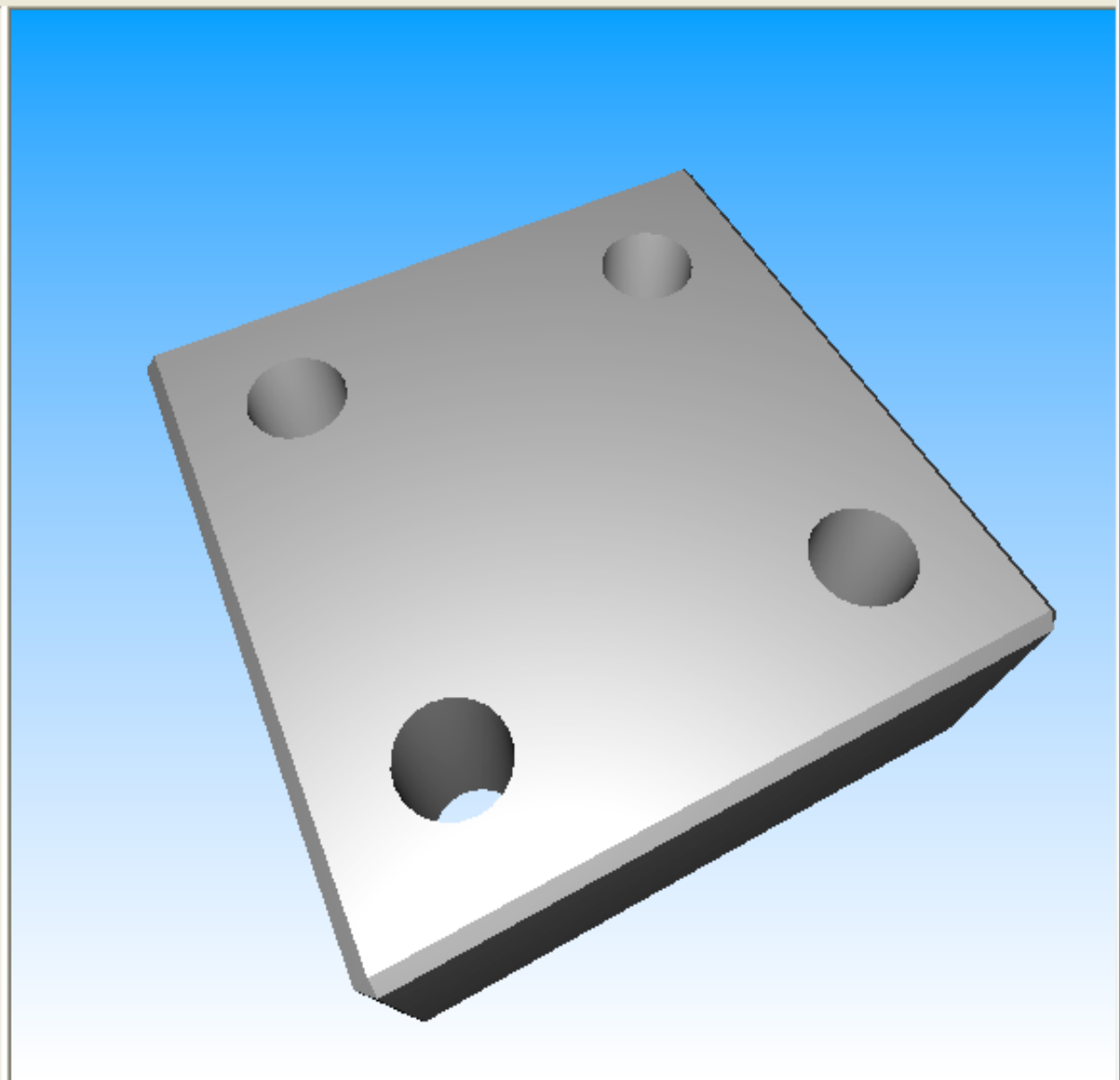


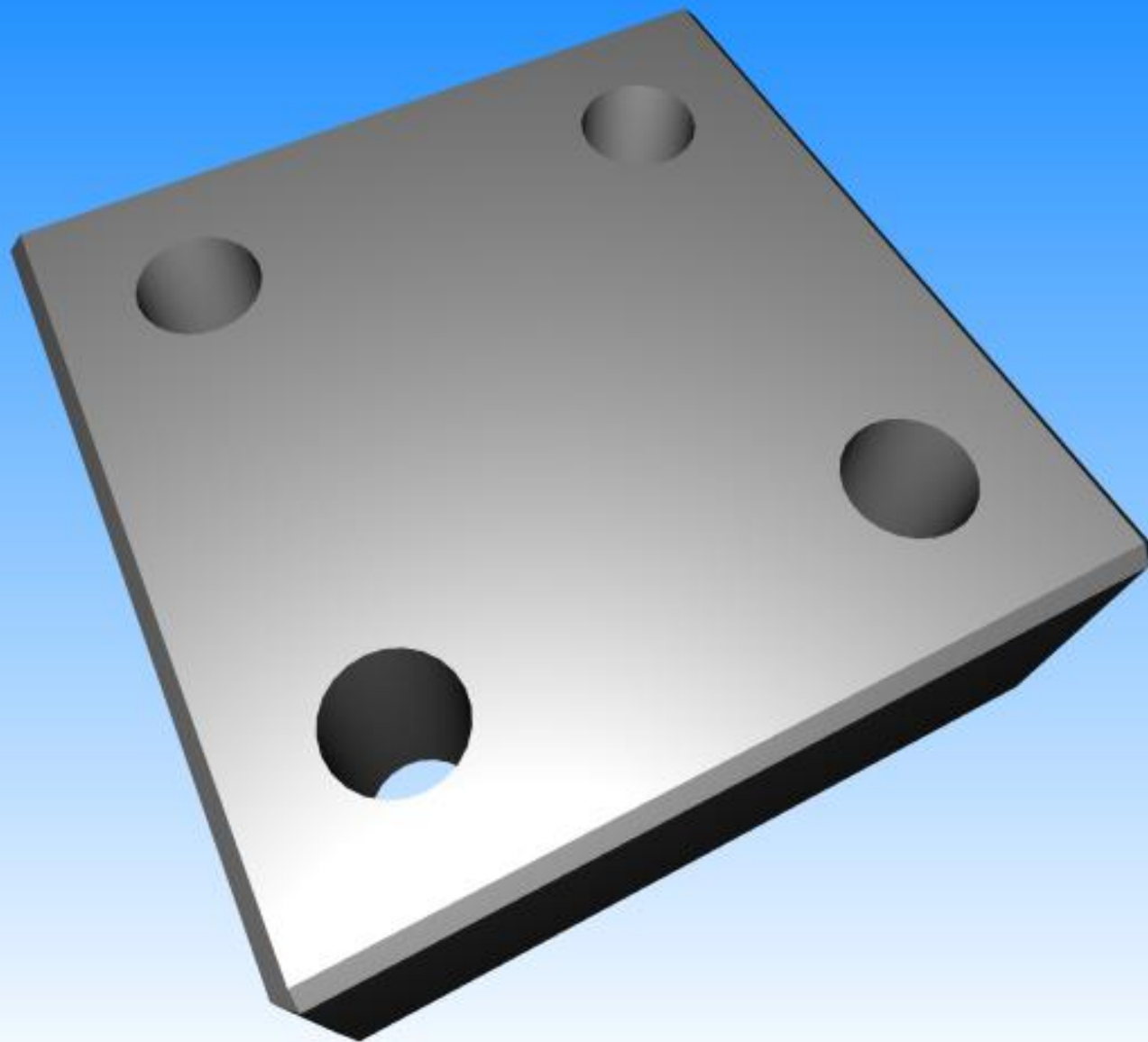


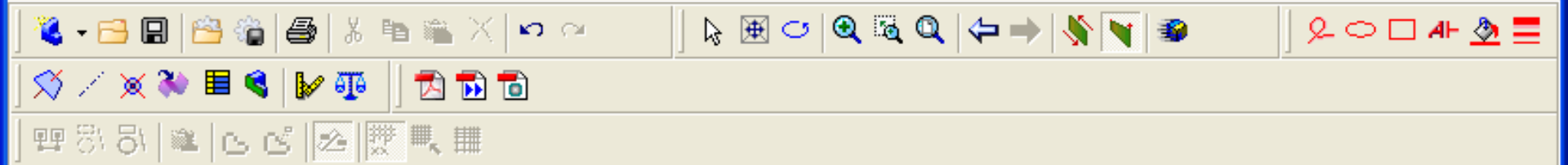
Archives Editors Lighting Schemes User Archives



- Backgrounds
- Foregrounds
- Lighting Studios
- Materials**
- Scenery
- Schemes
- Views

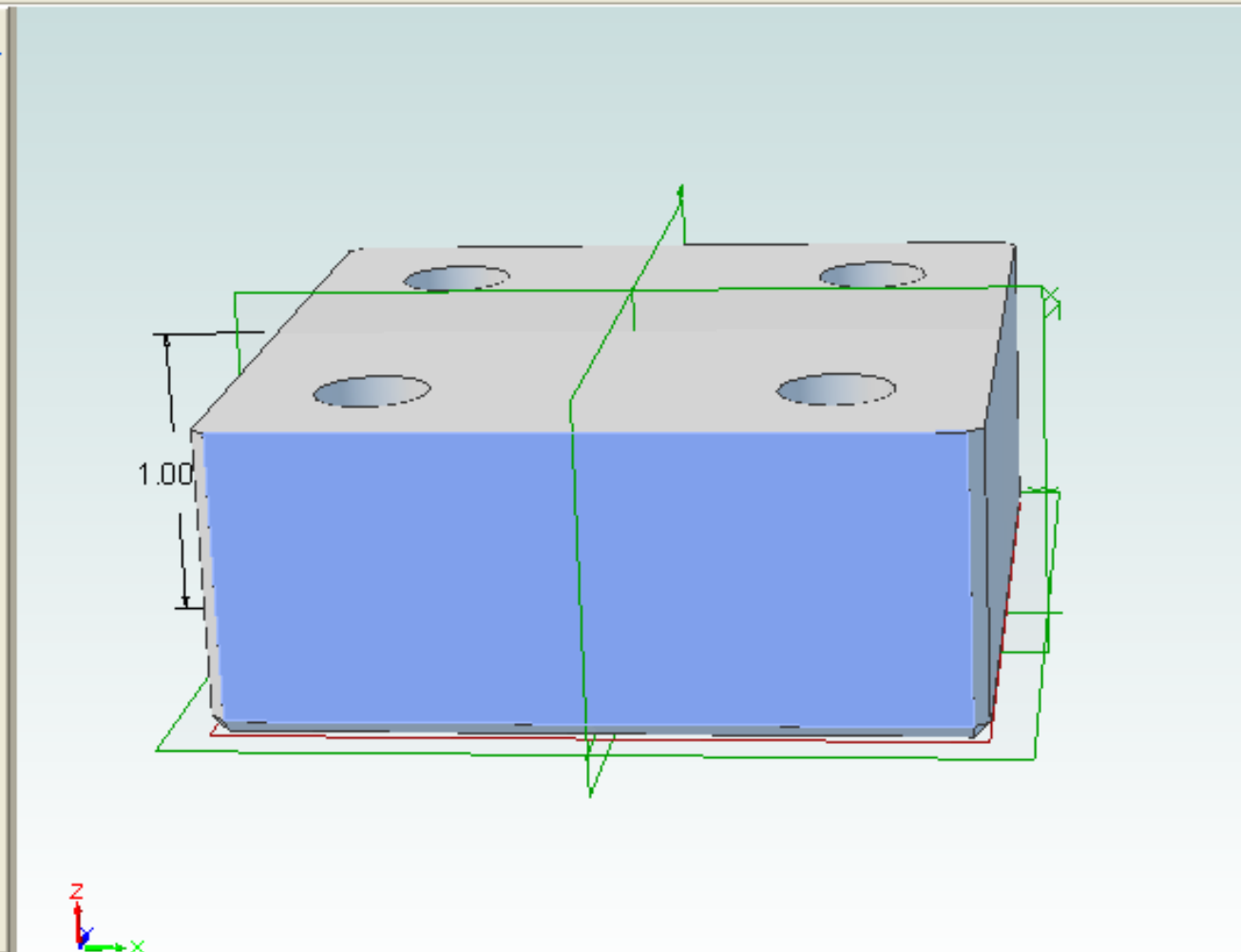






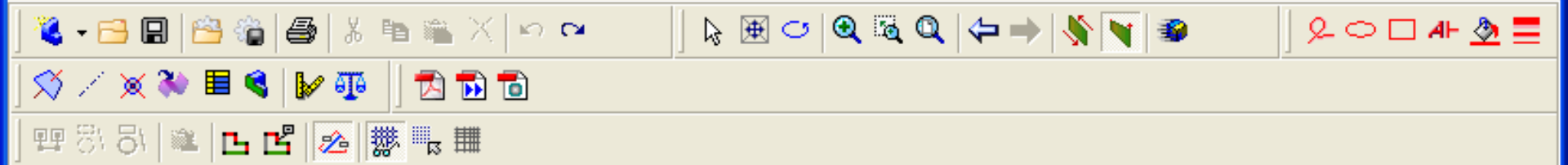
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- Section Views
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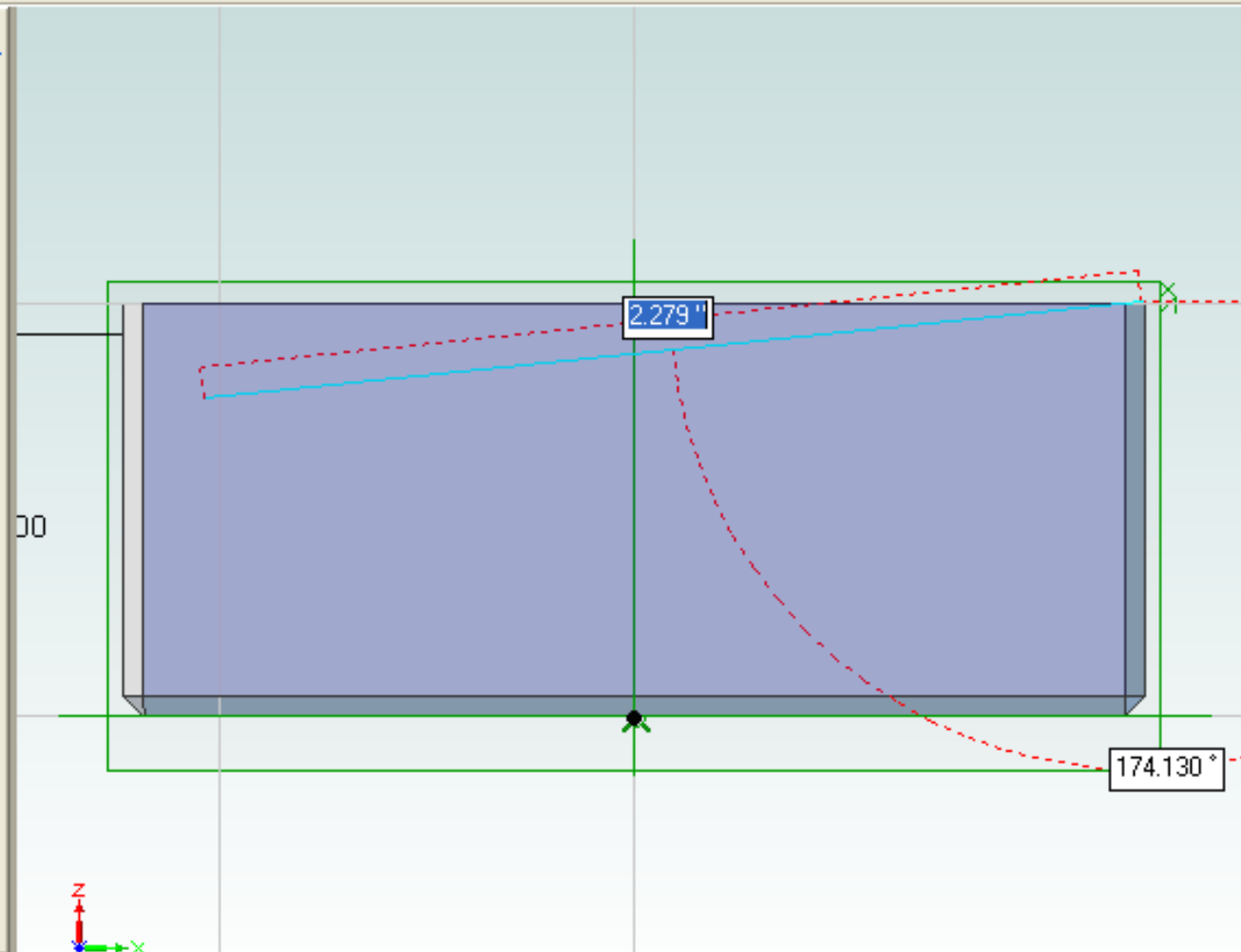
Click to start Sketching





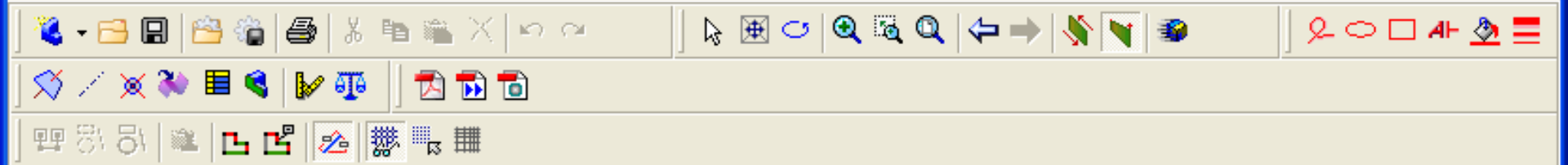
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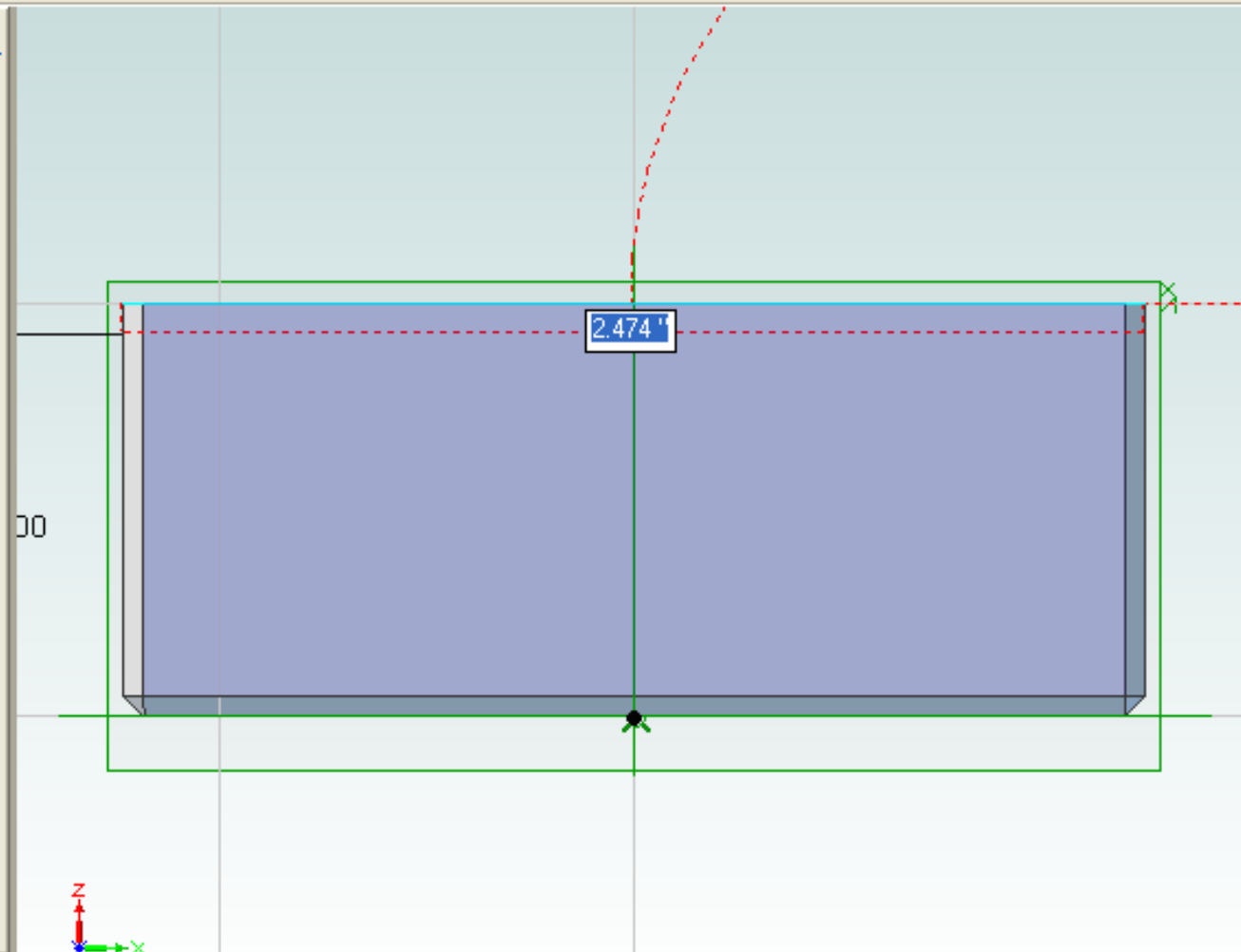
Pick next point. Double-click to finish line or ESC to quit line.





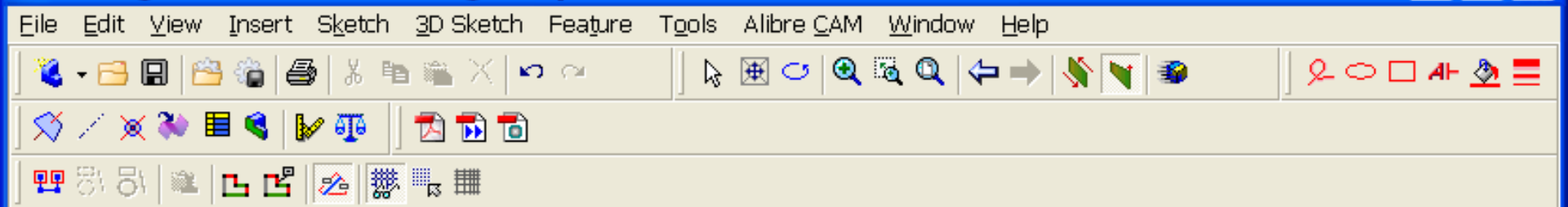
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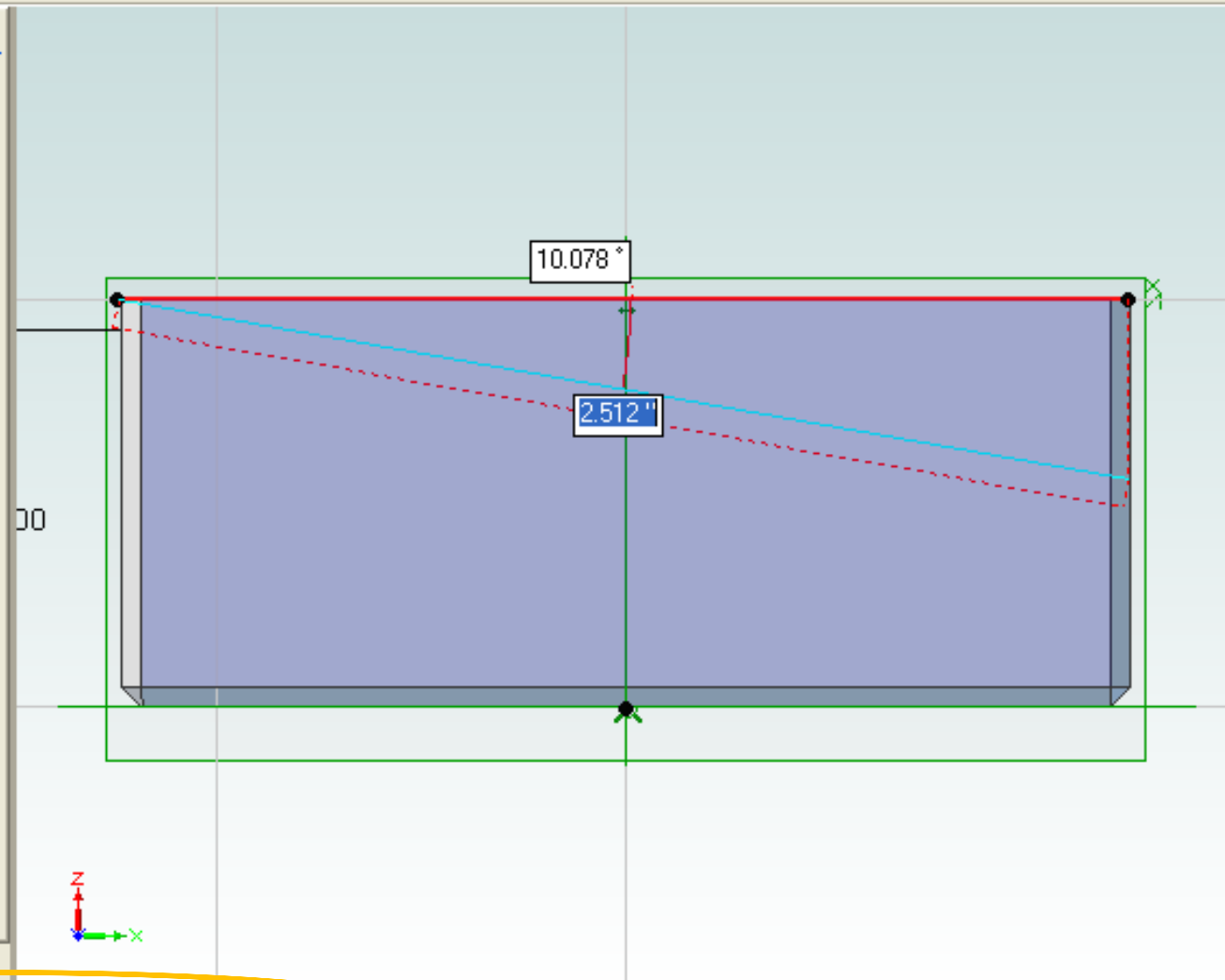
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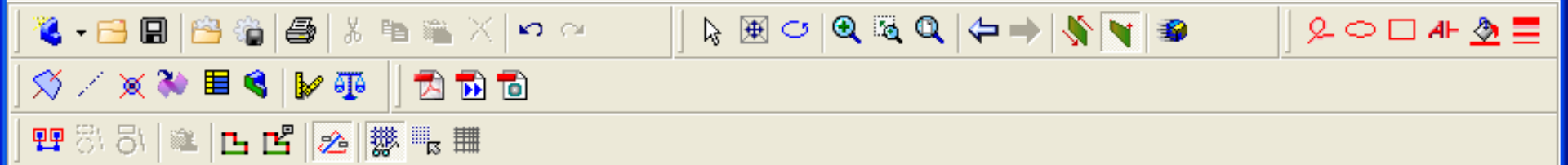




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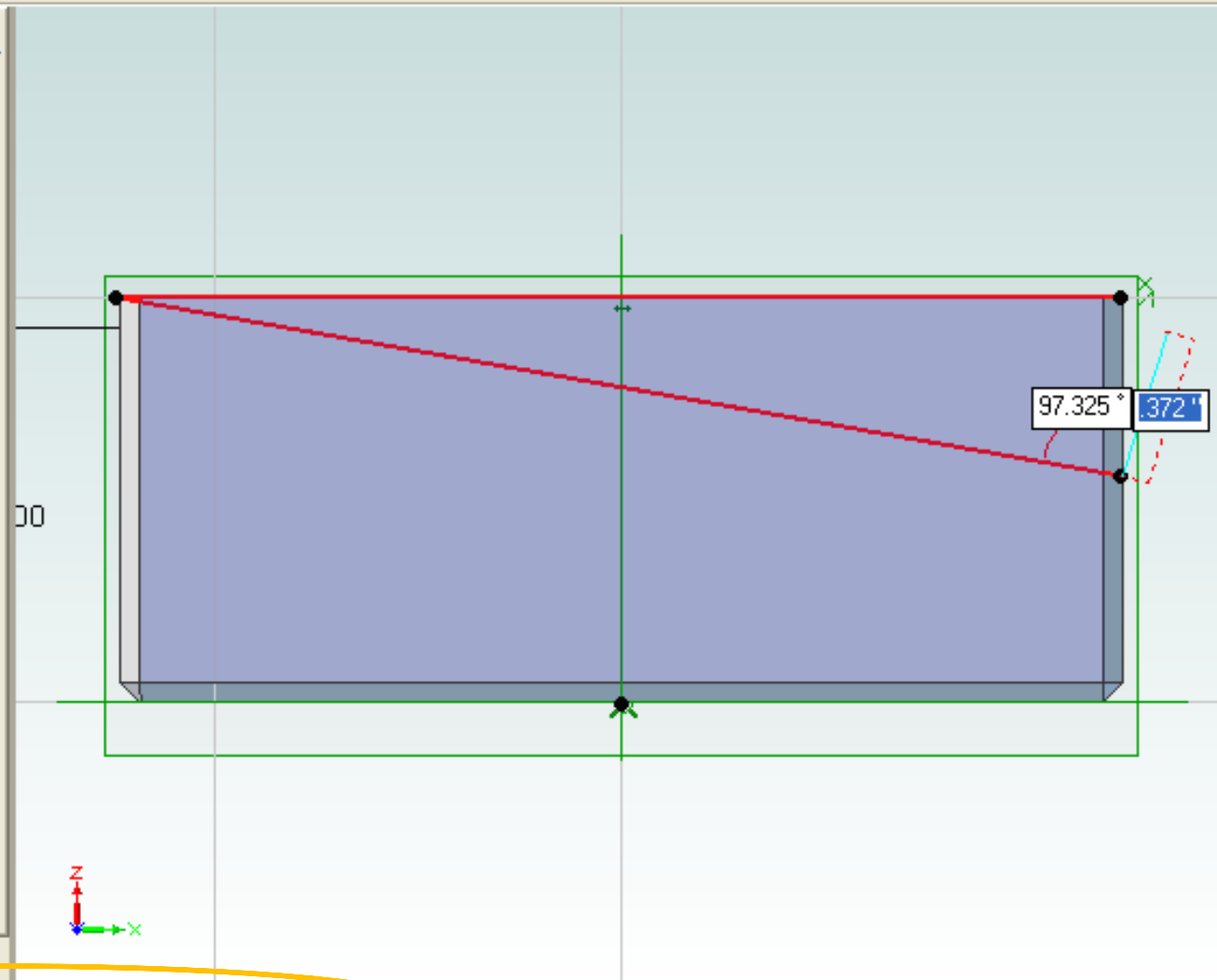
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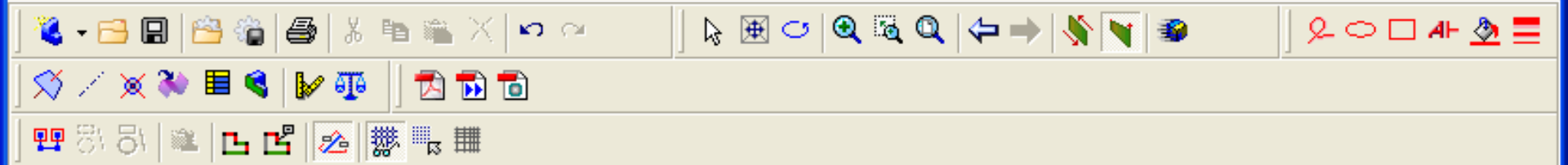
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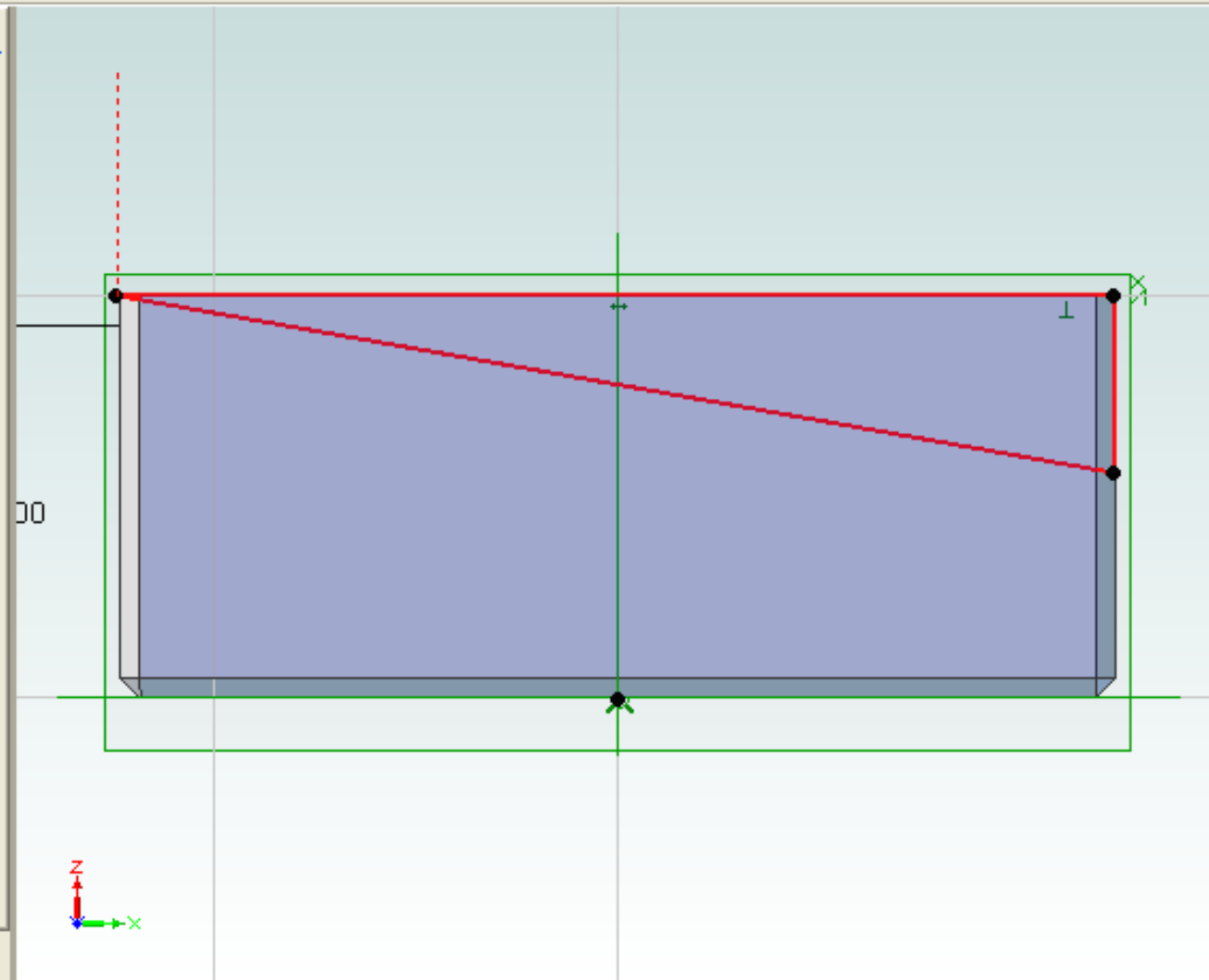
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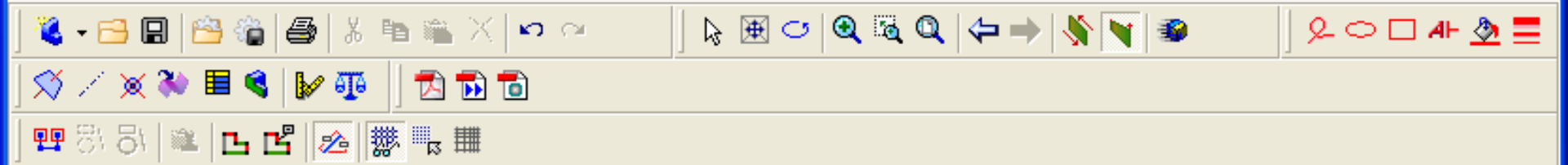




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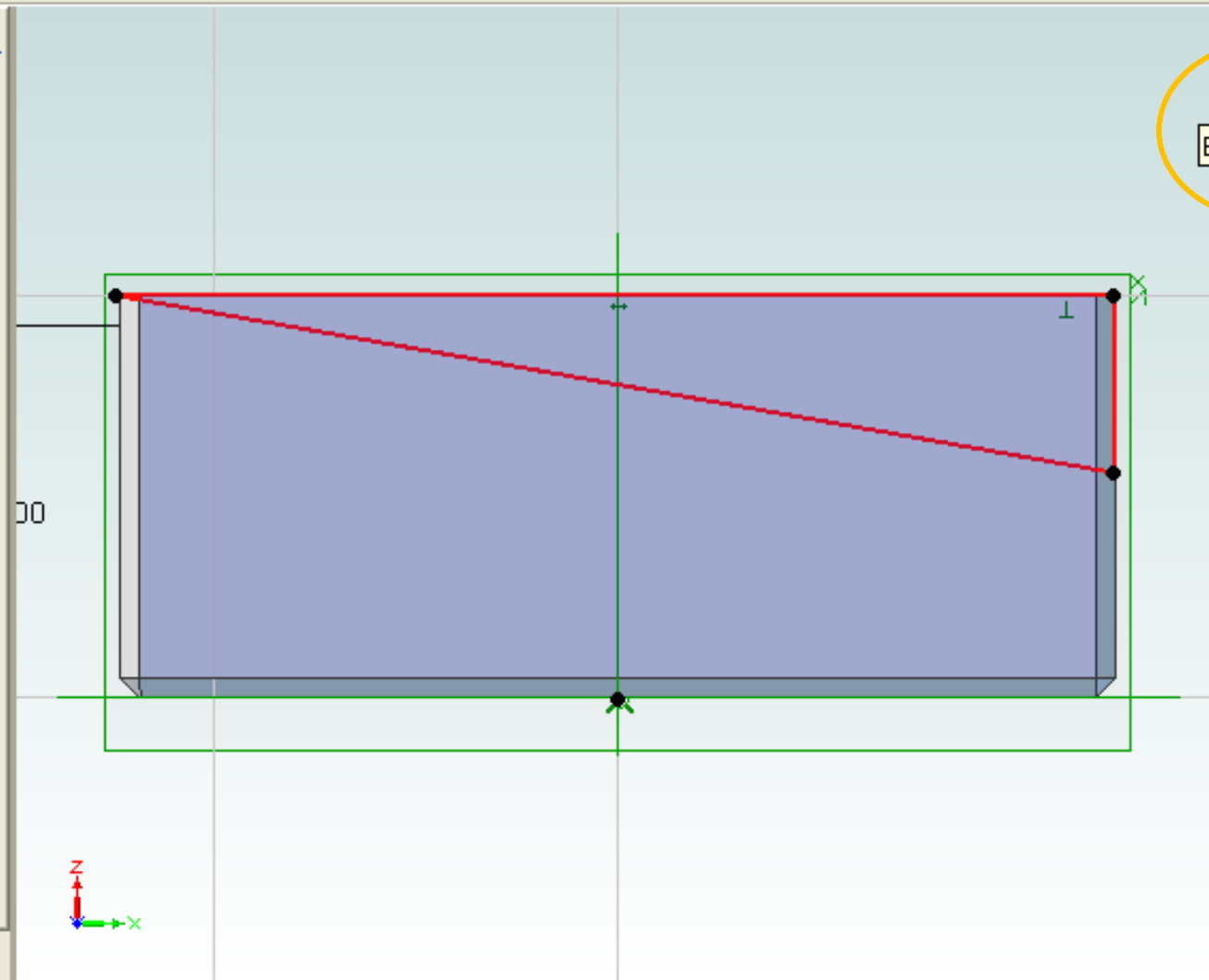
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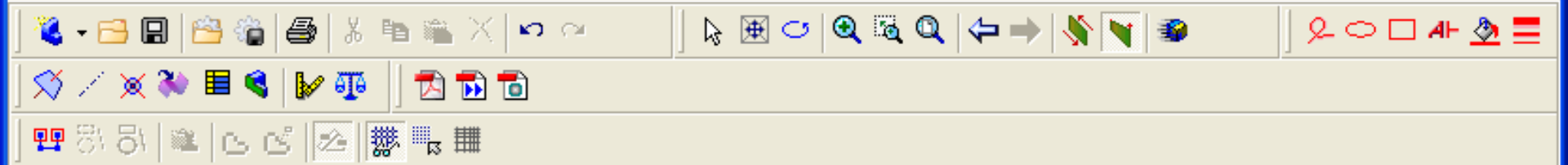




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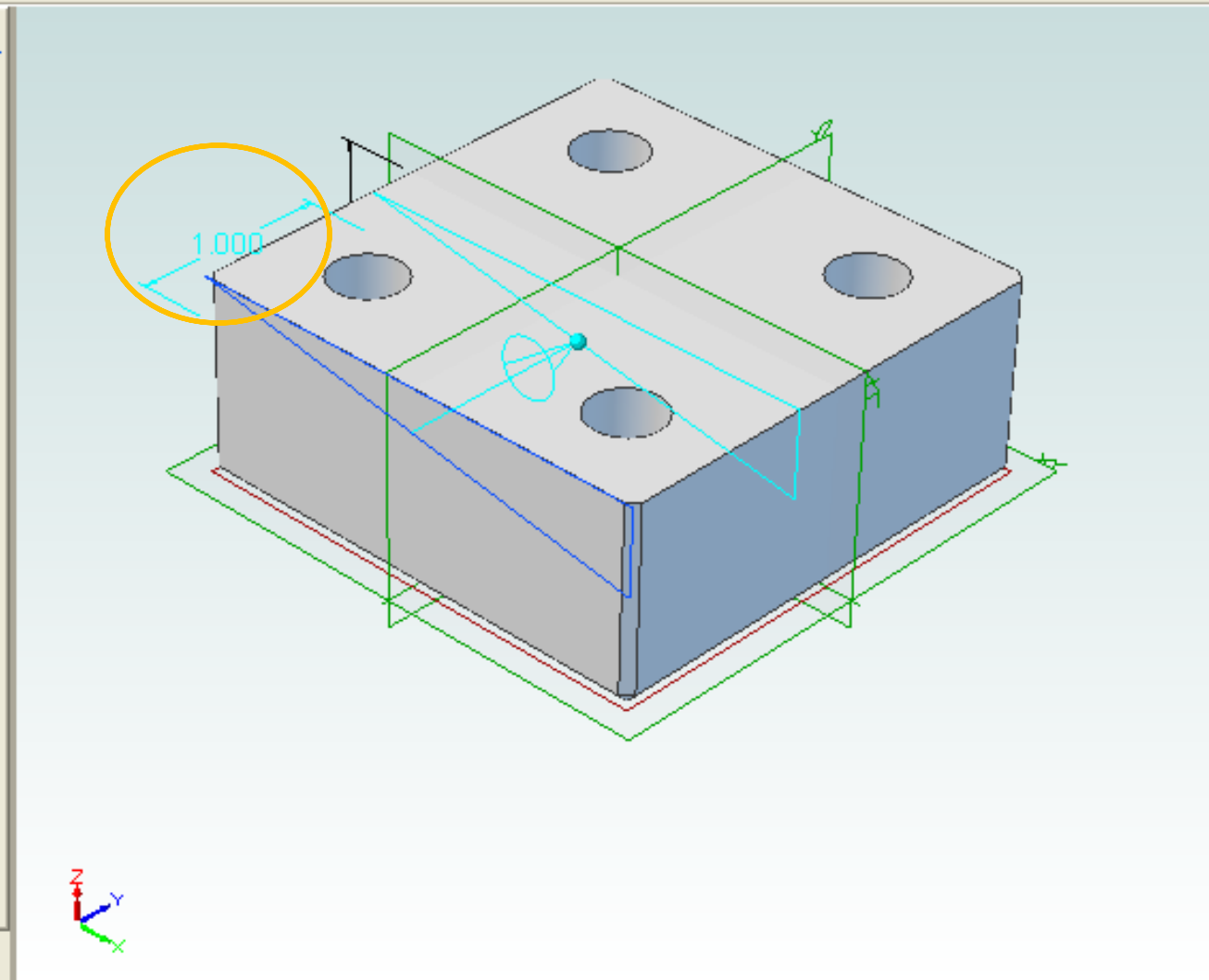
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### Design Explorer

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  - Mirror<4>
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  - Sketch<3>
- [-] Edges
  - Edge<1>







# Extrude Cut



## Sketch

Sketch<3>

## Direction

Along Normal

Select

## Draft Angle

0

Outward

## Type

To Depth

## Depth

-1.000"

Reverse

## To Geometry

Target:

Offset:

.000"

Label:

Extrusion<6>

OK

Cancel





# Extrude Cut



Sketch

 Sketch<3>

Direction

Along Normal

Select

Draft Angle

0 

Outward

Type:

Through ALL 

Depth

1.000" 

Reverse

To Geometry

Target:

Offset:

.000" 

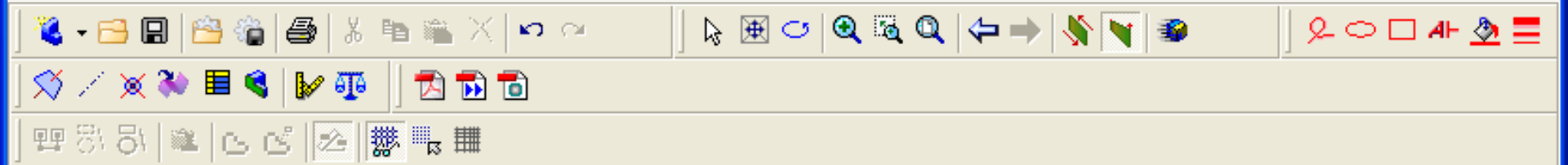
Label:

Extrusion<6>

OK

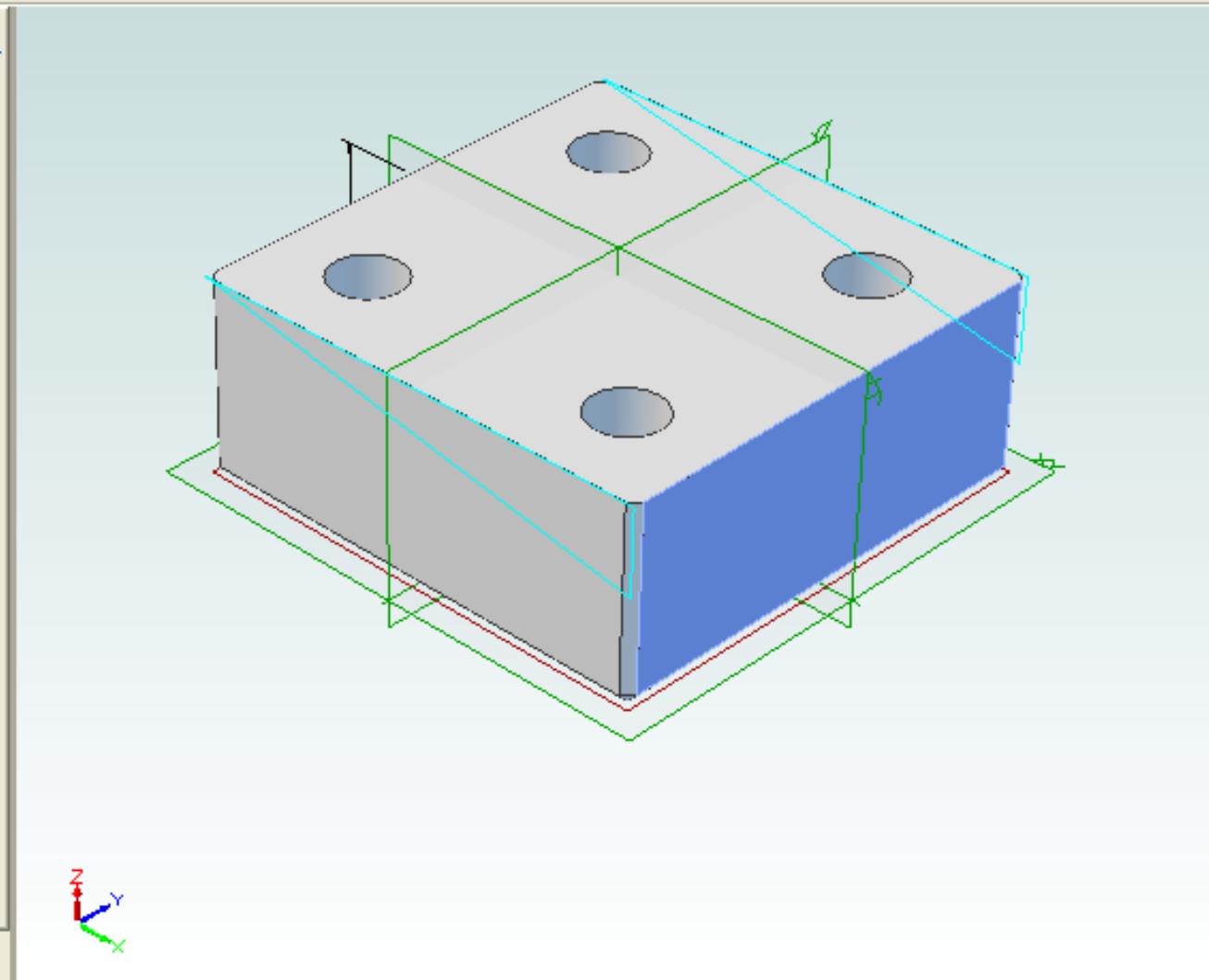
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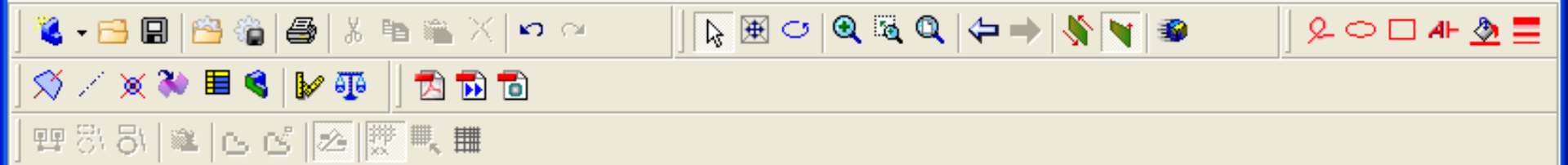




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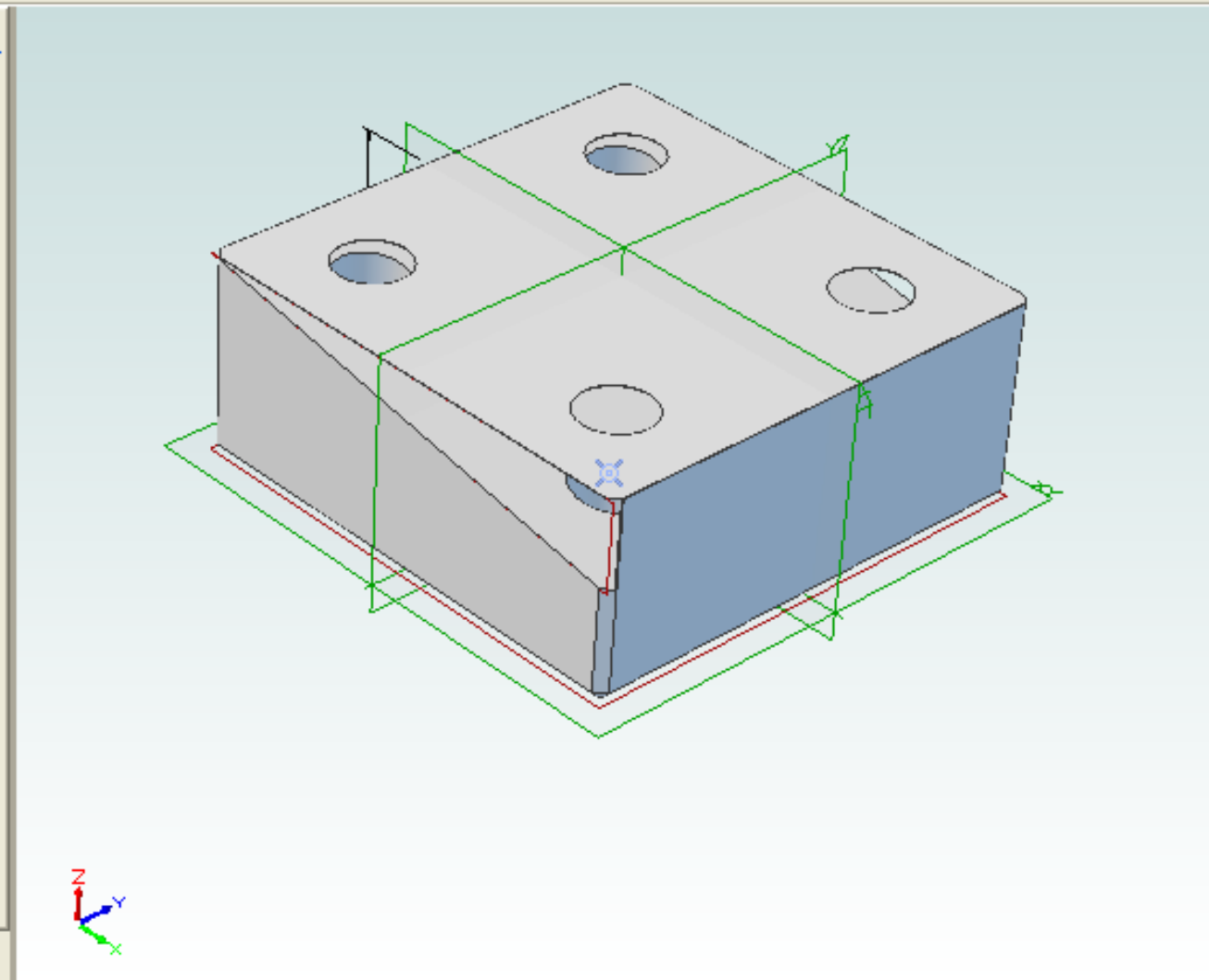
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- Section Views
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  - Edge<1>





**Design Explorer**

- [-] Axes
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  - Z-Axis
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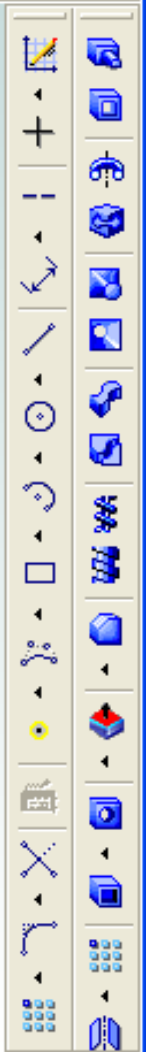
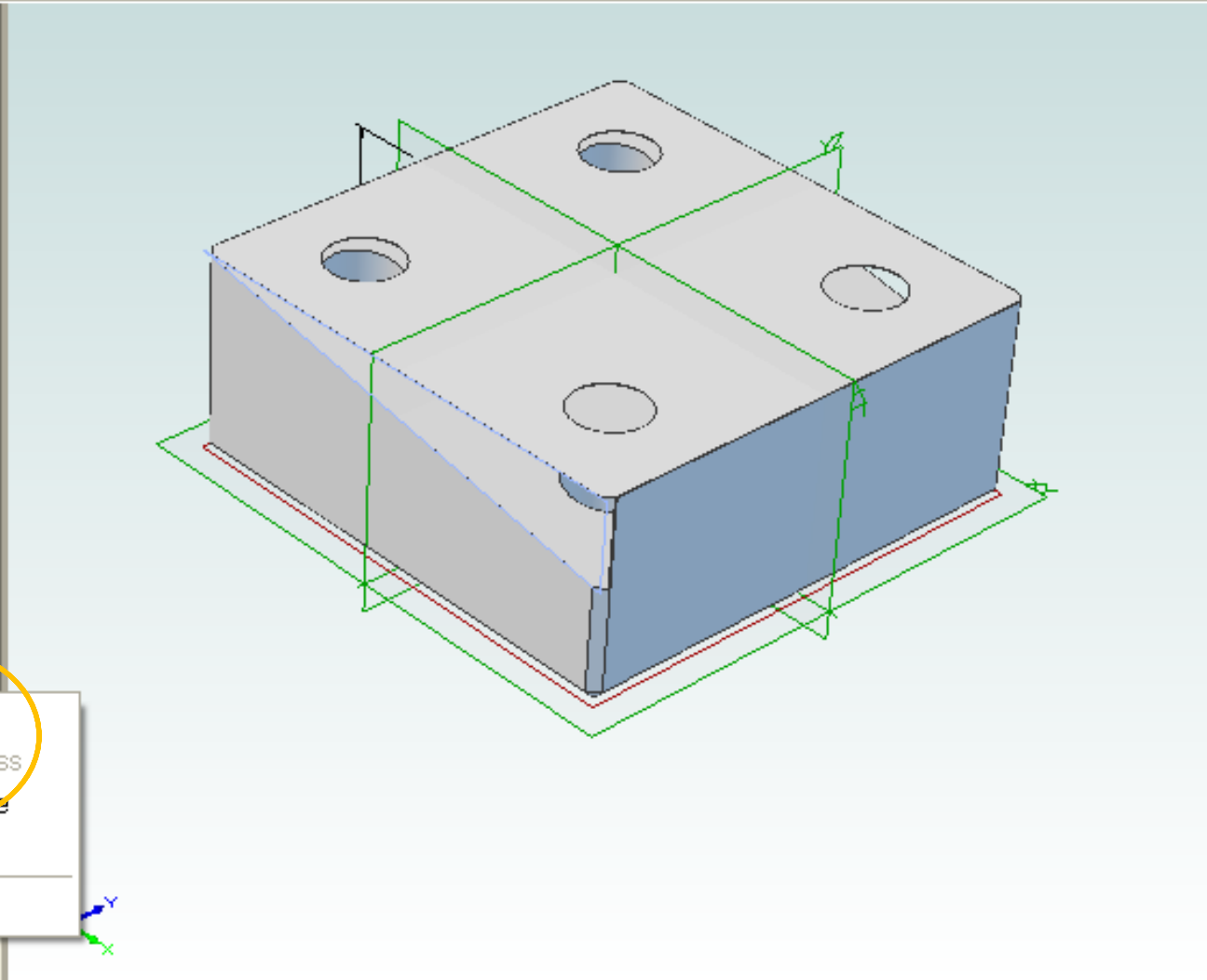


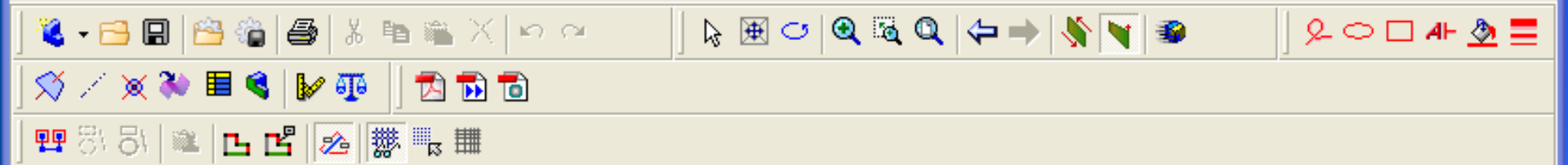


- Design Explorer**
- Planes
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    - ZX-Plane
  - Points
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  - Surfaces
  - Redline Views
  - Section Views
  - Features
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    - Edge Chamfer<5>
    - Extrusion<6>
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    - Edge<4>

Context menu for the selected edge:

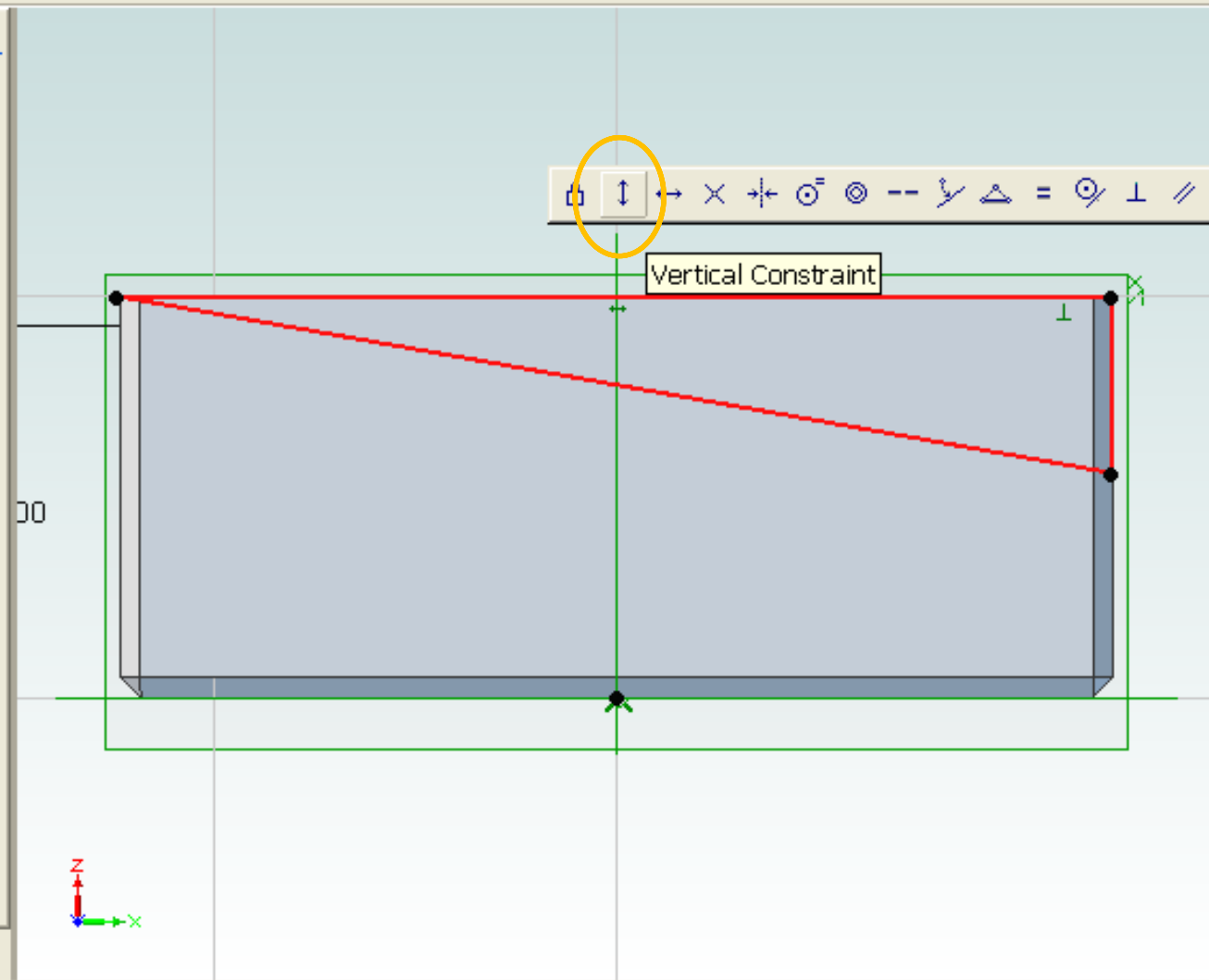
- Edit
- Suppress
- Rename
- Delete
- Status

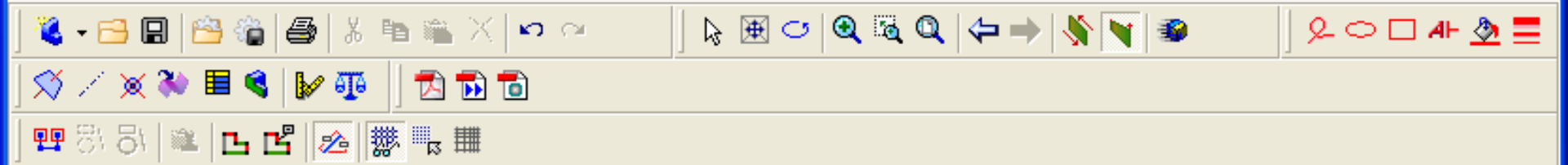




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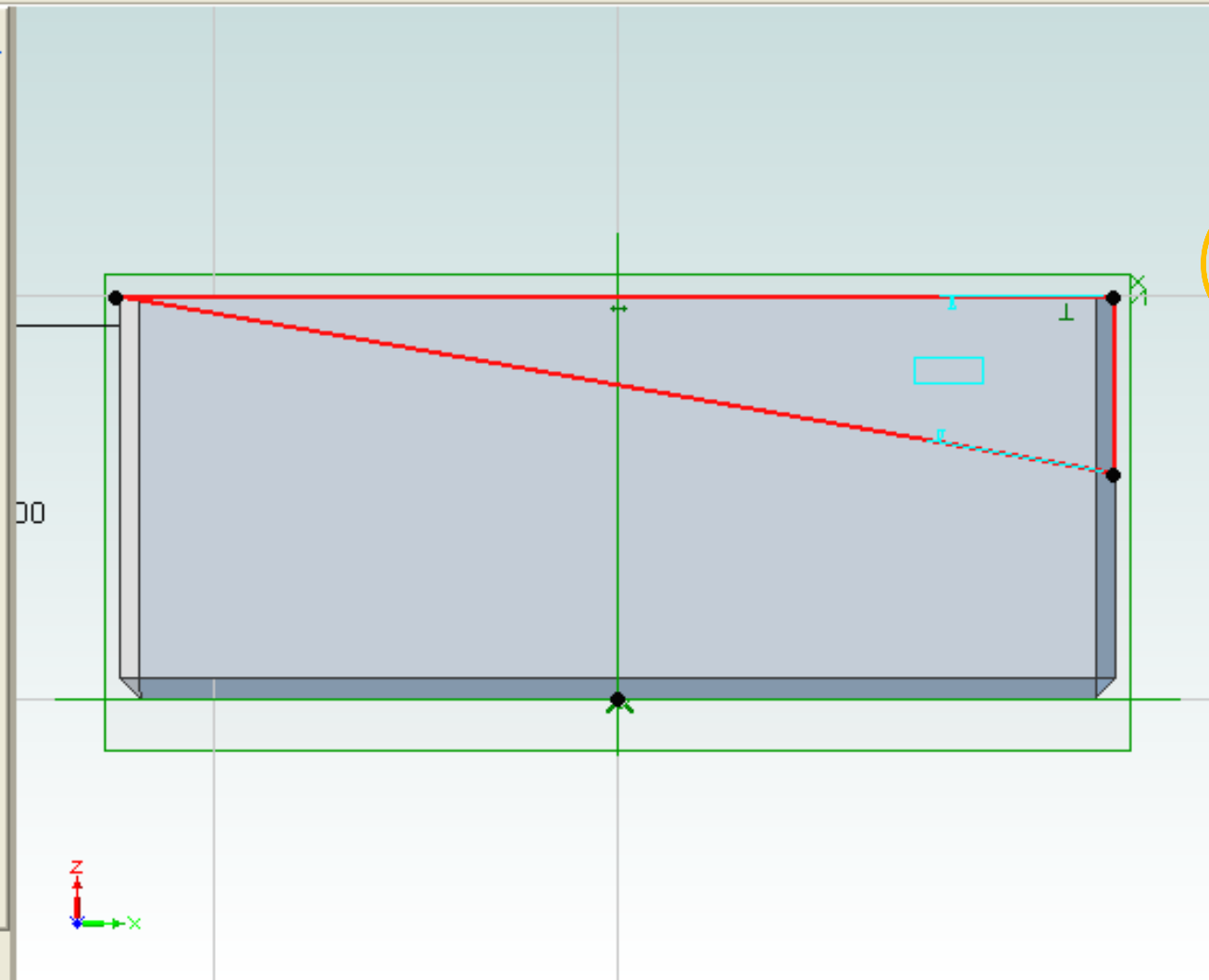
- Planes
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- Points
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- Surfaces
- Redline Views
- Section Views
- Features
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  - Mirror<4>
  - Edge Chamfer<5>
- Extrusion<6>
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- Edges
  - Edge<1>
  - Edge<2>
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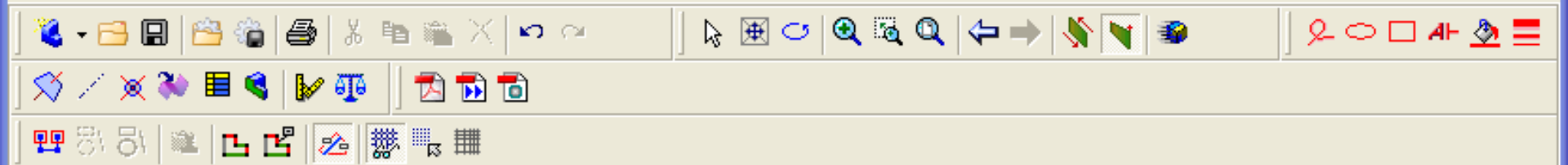




### Design Explorer

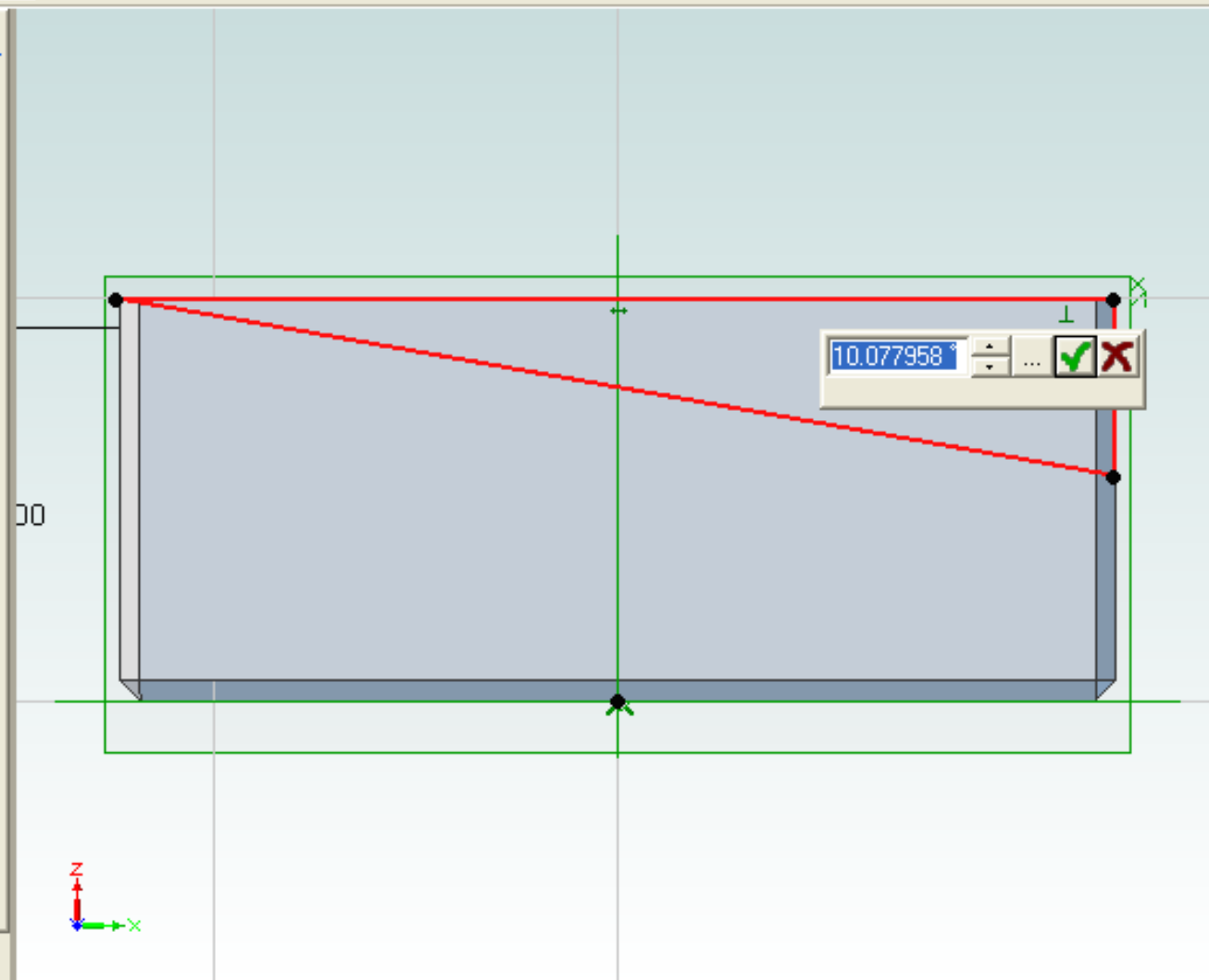
- Planes
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- Points
  - Origin
- Surfaces
- Redline Views
- Section Views
- Features
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    - Sketch<1>
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  - Mirror<4>
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- Extrusion<6>
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- Edges
- Edge<1>
- Edge<2>
- Edge<3>
- Edge<4>


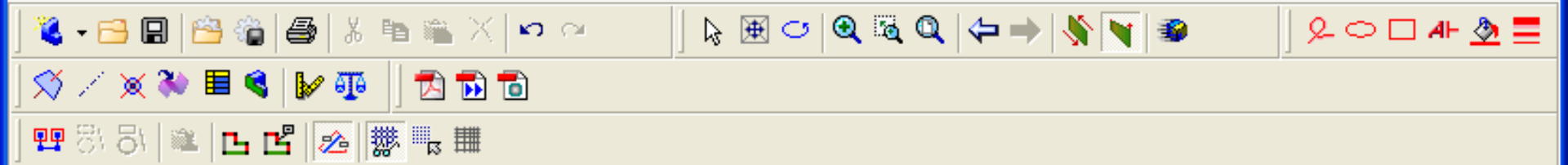


**Design Explorer**

- Planes
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  - ZX-Plane
- Points
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- Surfaces
- Redline Views
- Section Views
- Features
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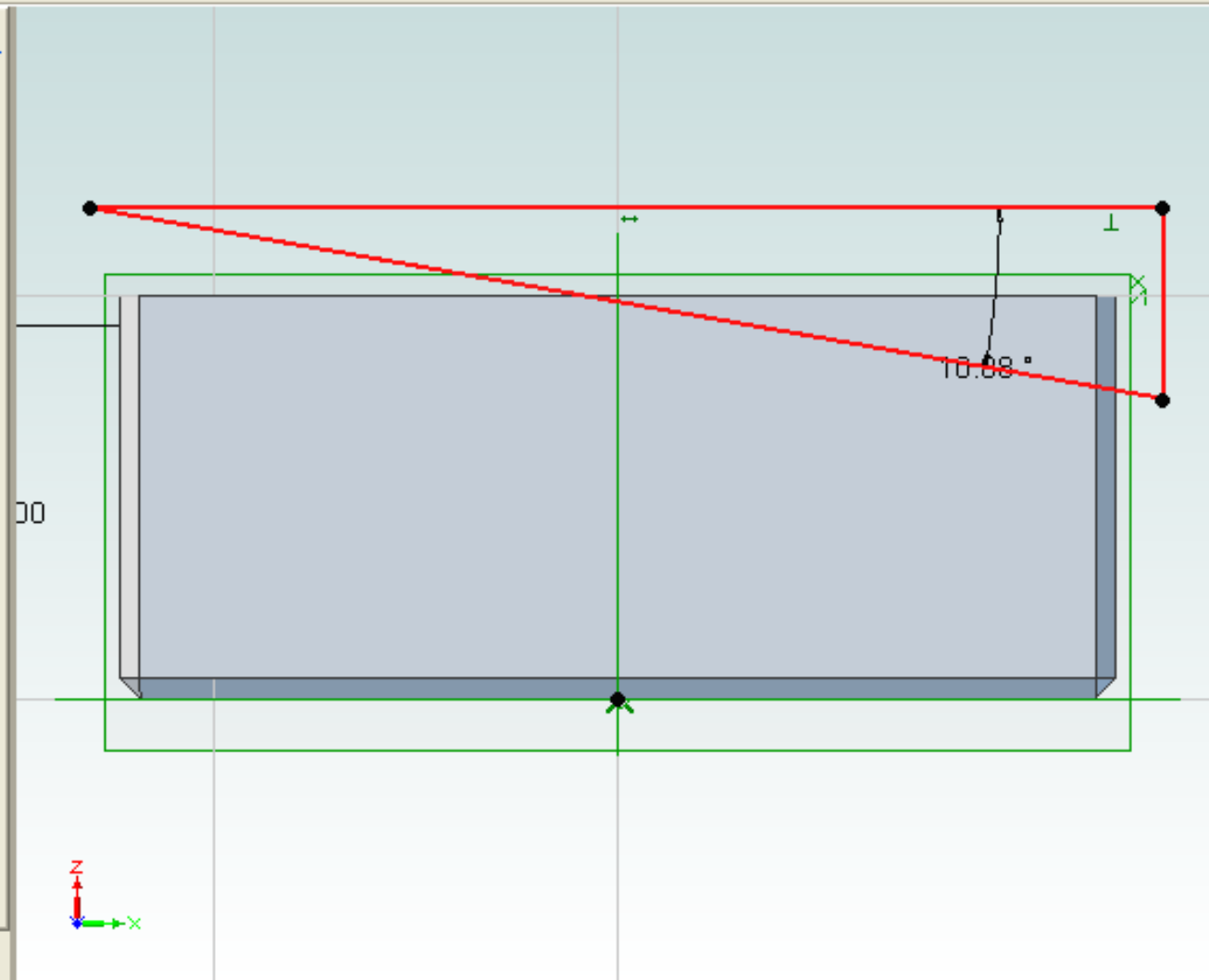


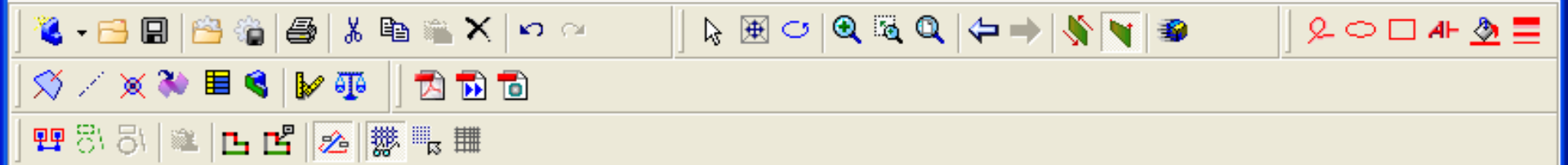




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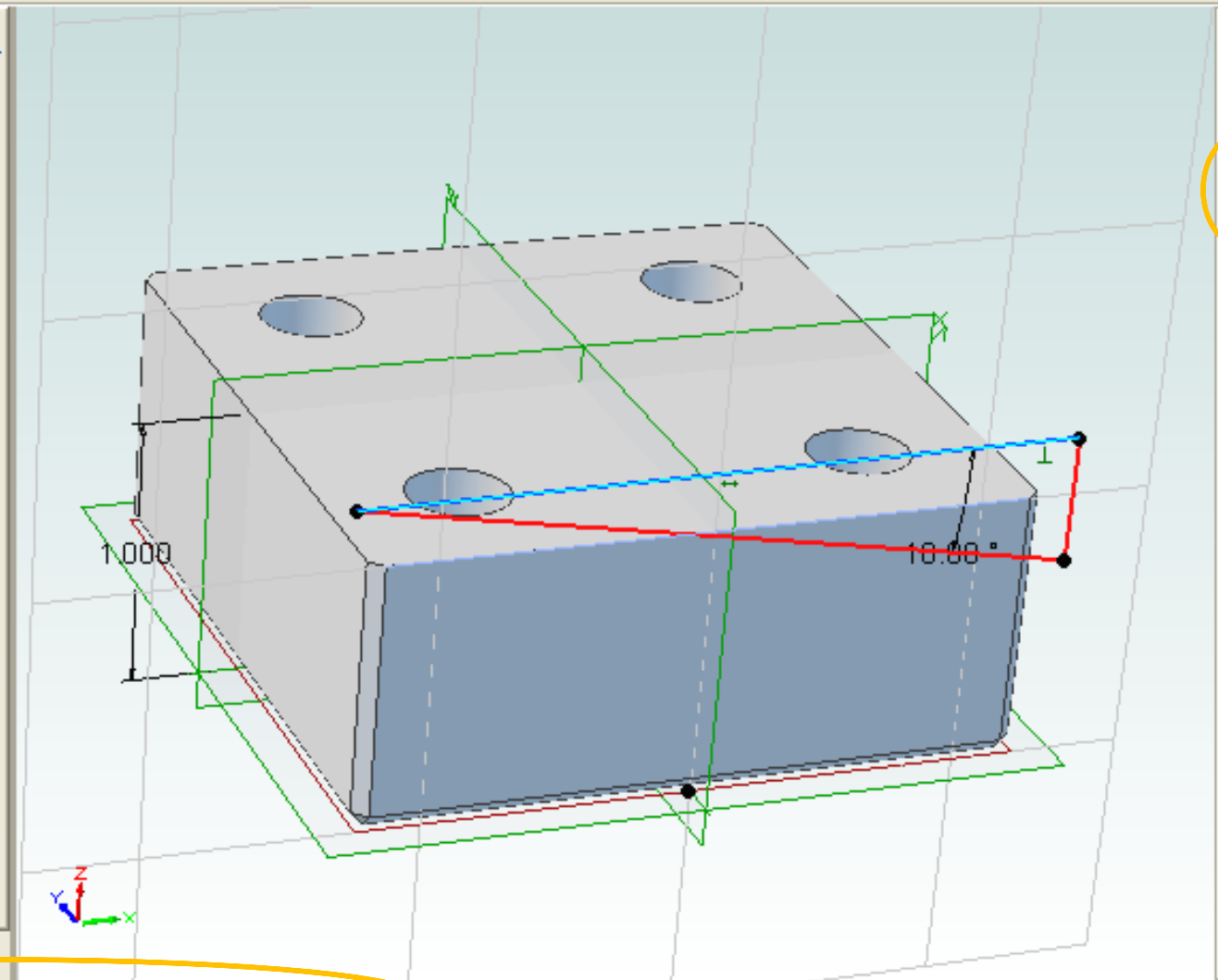
- Planes
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  - YZ-Plane
  - ZX-Plane
- Points
  - Origin
- Surfaces
- Redline Views
- Section Views
- Features
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  - Mirror<3>
  - Mirror<4>
  - Edge Chamfer<5>
- Extrusion<6>
  - Sketch<3>
- Edges
  - Edge<1>
  - Edge<2>
  - Edge<3>
  - Edge<4>





**Design Explorer**

- Planes
  - XY-Plane
  - YZ-Plane
  - ZX-Plane
- Points
  - Origin
- Surfaces
- Redline Views
- Section Views
- Features
  - Extrusion<1>
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  - Extrusion<2>
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- Extrusion<6>
  - Sketch<3>
- Edges
  - Edge<1>
  - Edge<2>
  - Edge<3>
  - Edge<4>



Select the SECOND line for the collinear constraint. Press ESC to cancel.

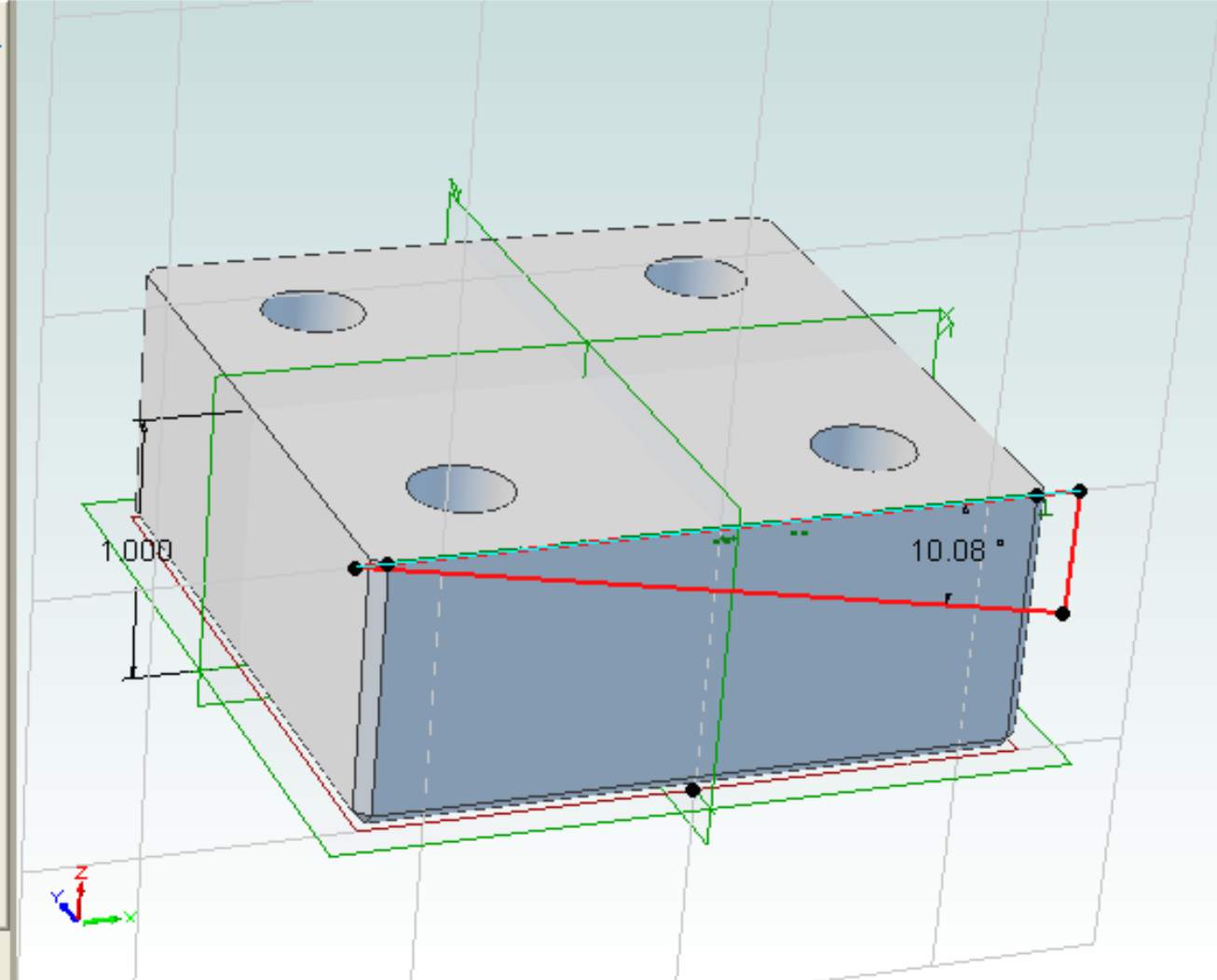
Under Defined

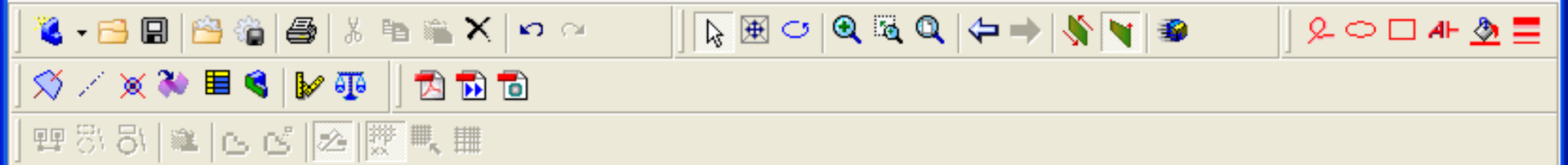
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### Design Explorer

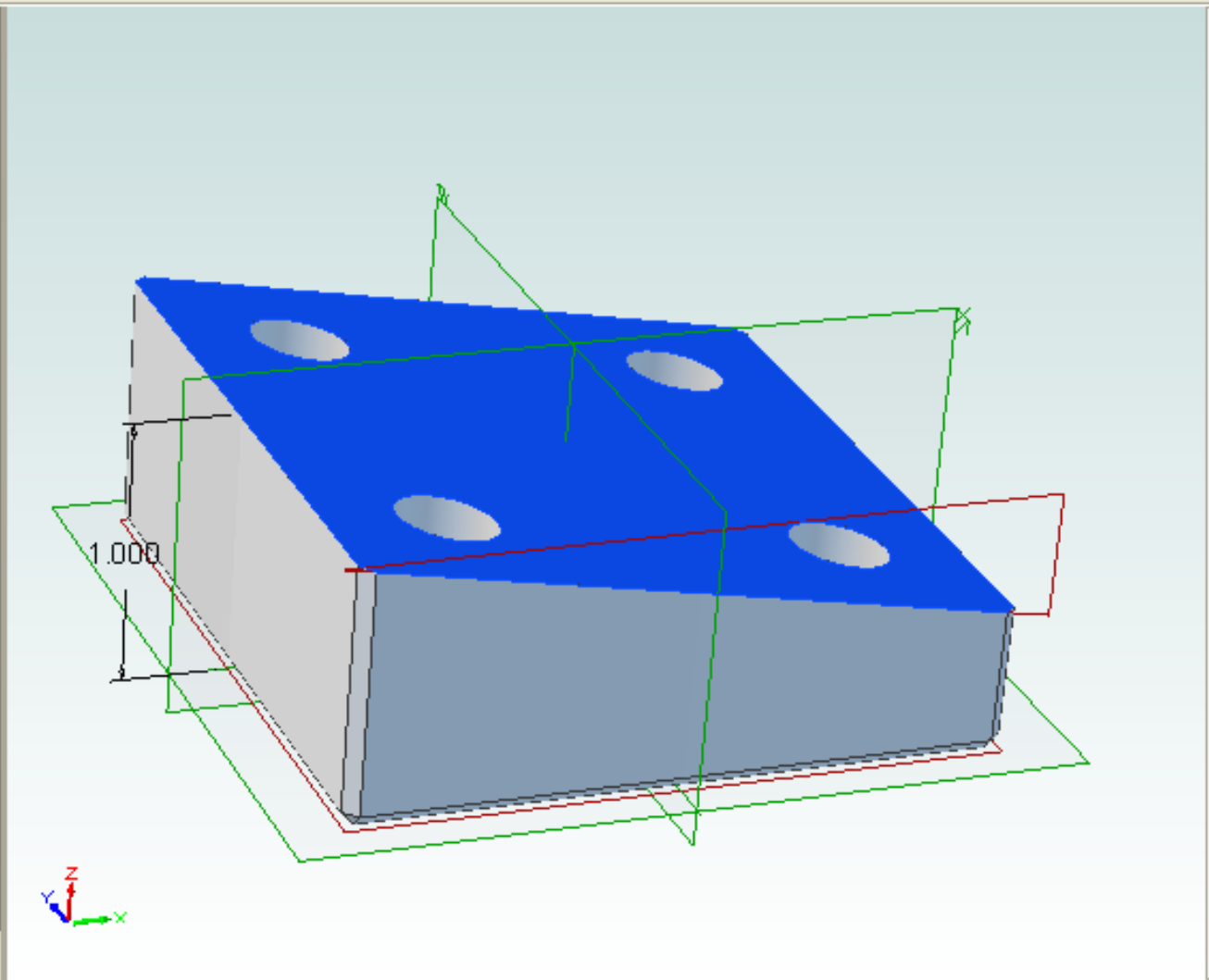
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- Surfaces
- Redline Views
- Section Views
- Features
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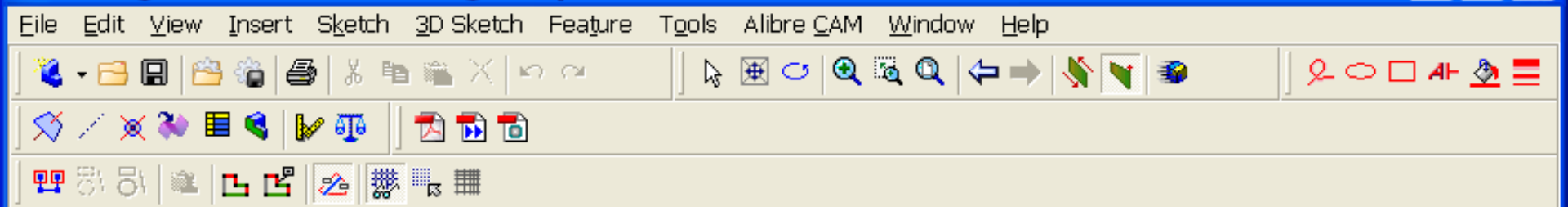




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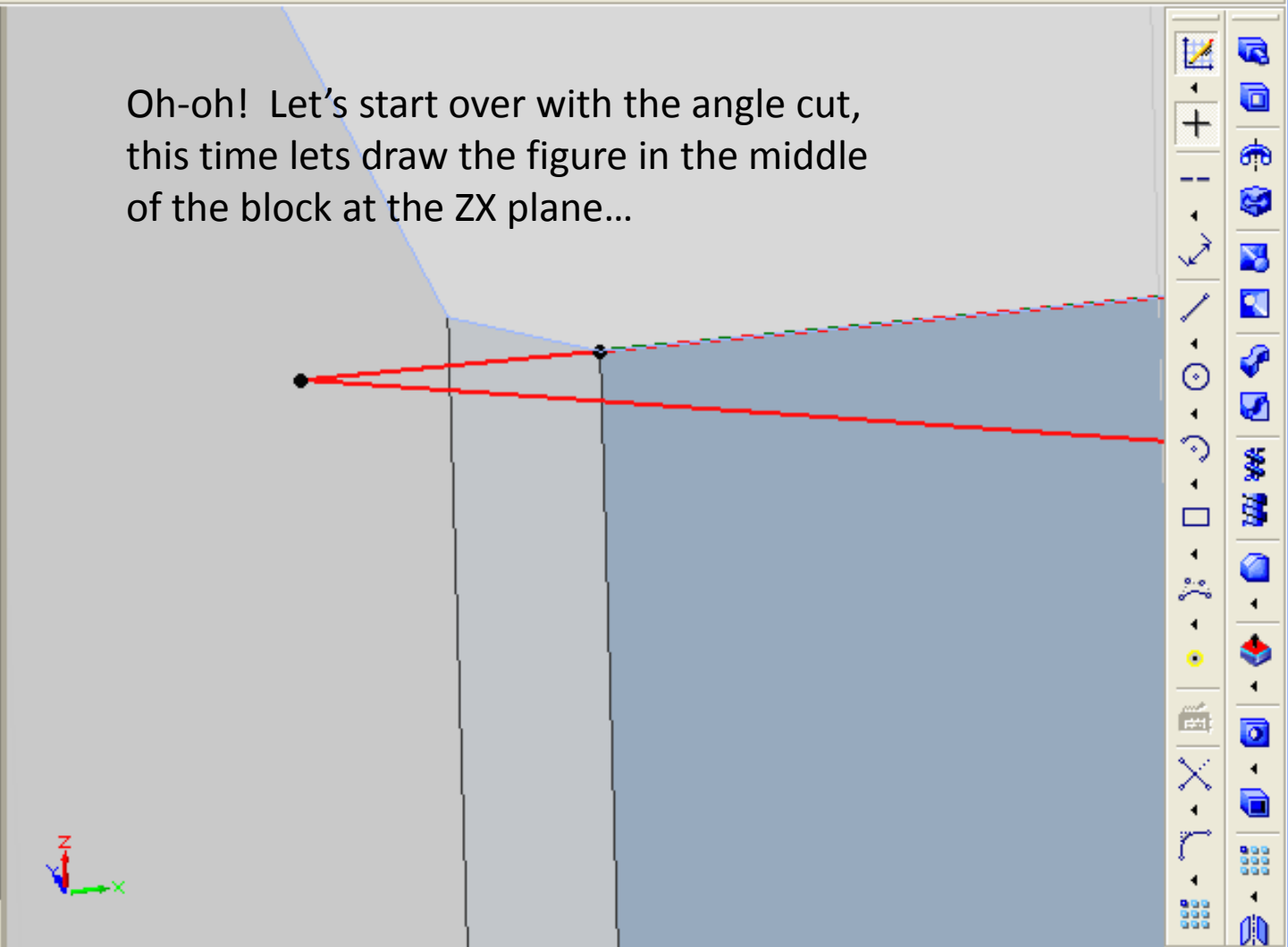
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- Surfaces
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- Section Views
- Features
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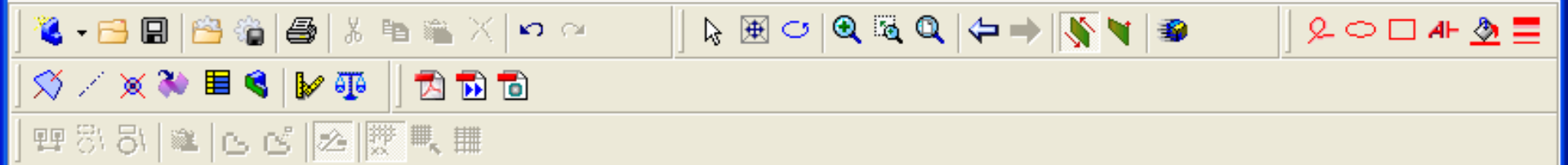




- Design Explorer**
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    - YZ-Plane
    - ZX-Plane**
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  - Section Views
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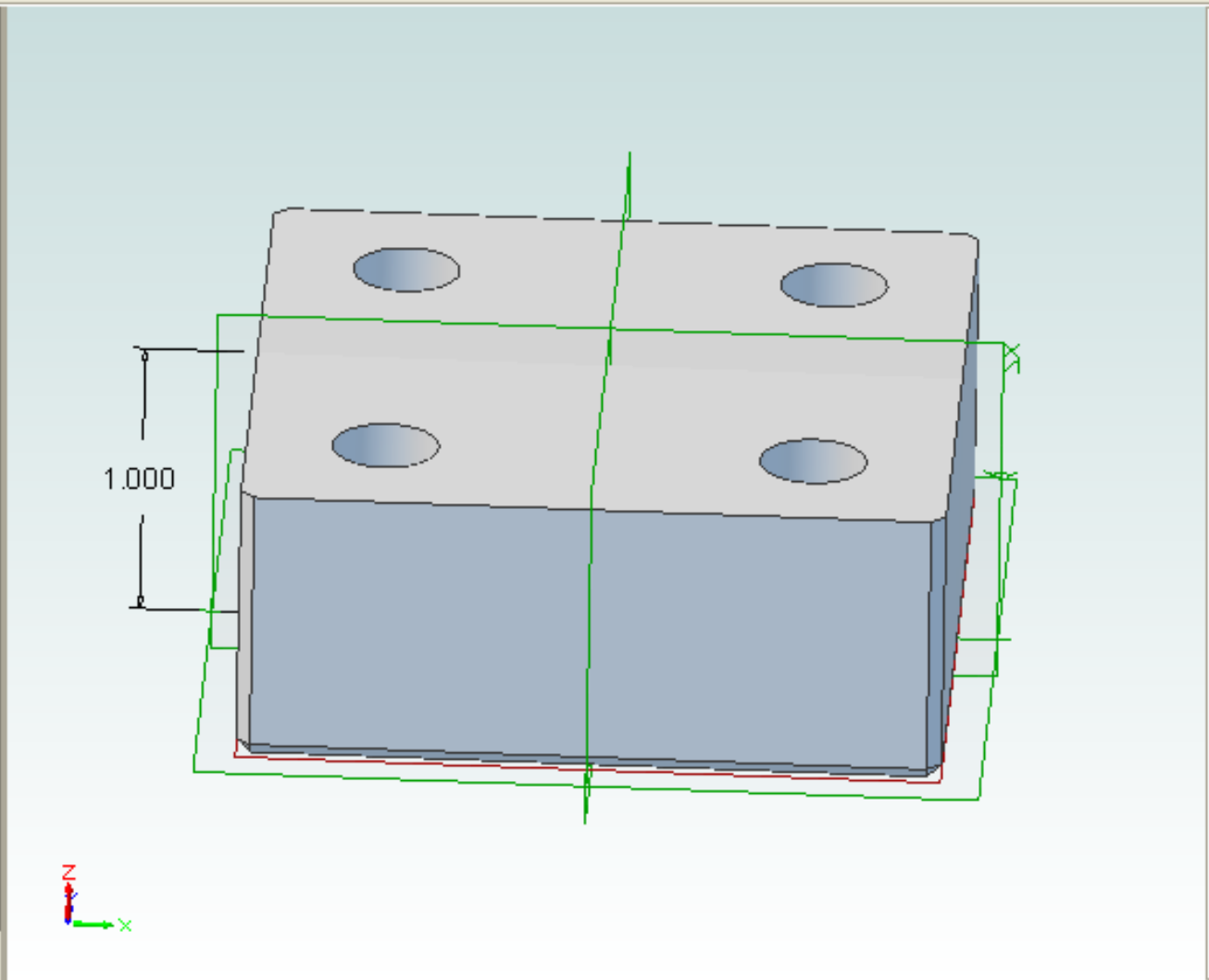
Oh-oh! Let's start over with the angle cut, this time lets draw the figure in the middle of the block at the ZX plane...

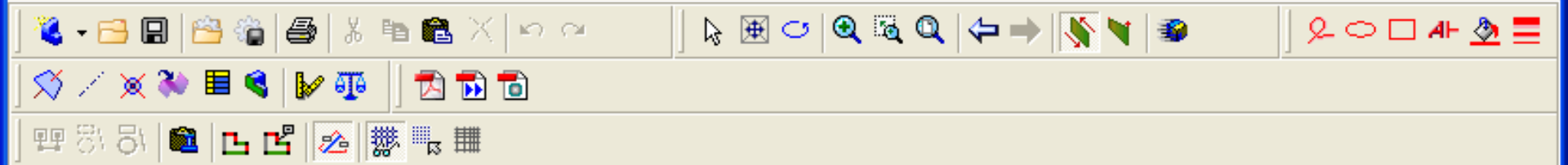




**Design Explorer**

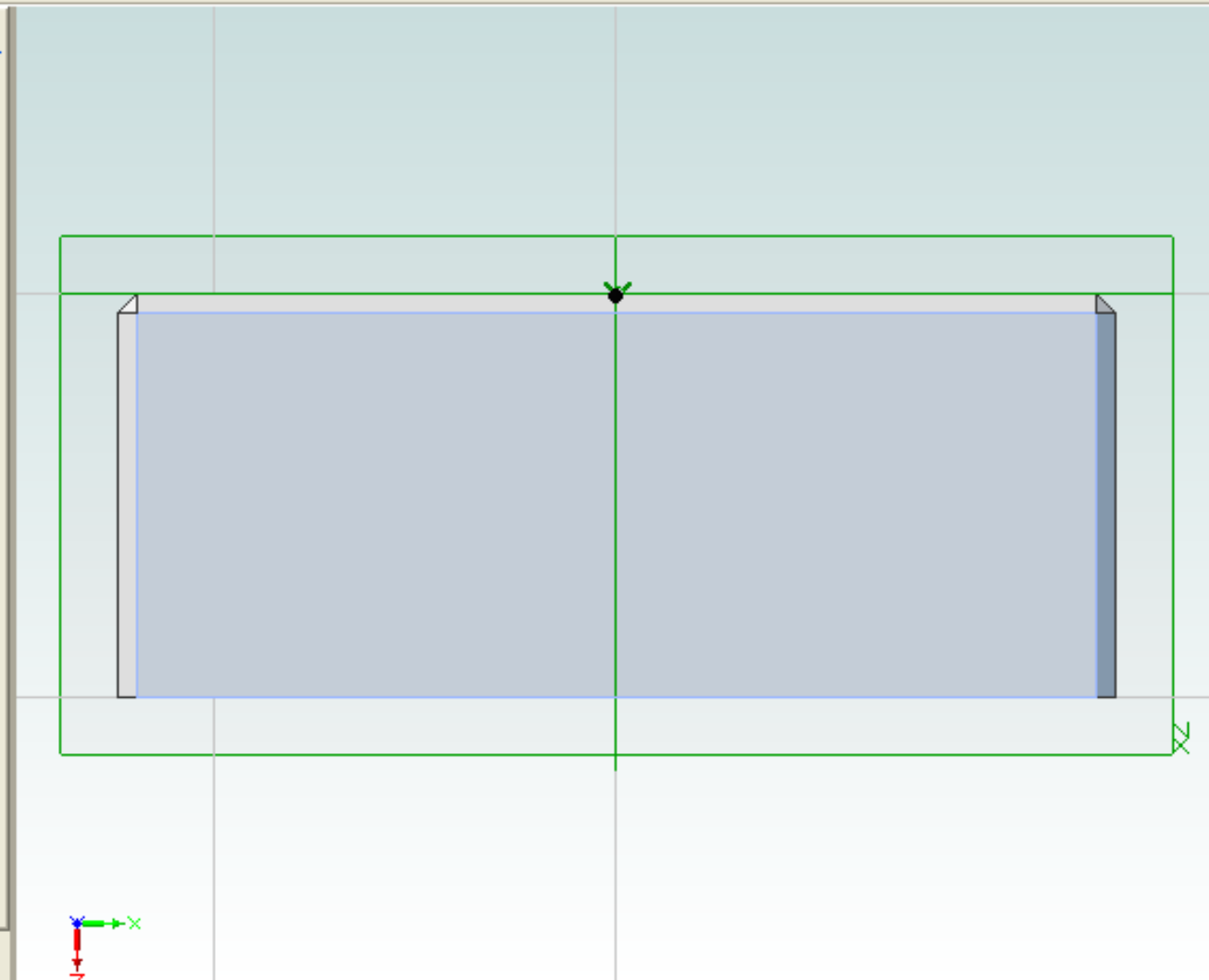
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- └ Points
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- └ Surfaces
- └ Redline Views
- └ Section Views
- └ Features
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- └ Edges
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**Design Explorer**

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    - Sketch<2>
  - Mirror<3>
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- └ Edges
  - Edge<1>





## Alibre Design - Save Notification



Alibre Design has detected that you have not saved 10DegBlock

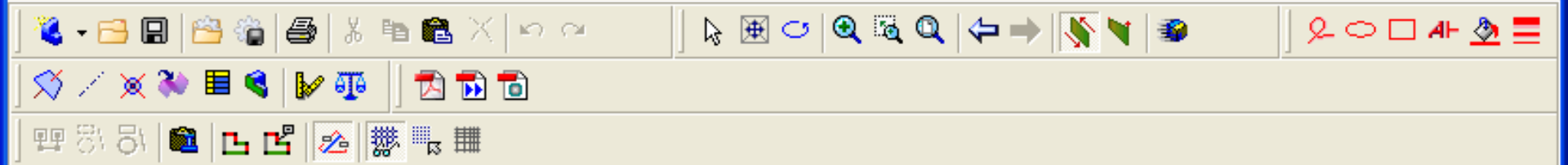
**Do not notify me about unsaved files**

Bring To Front

Ignore

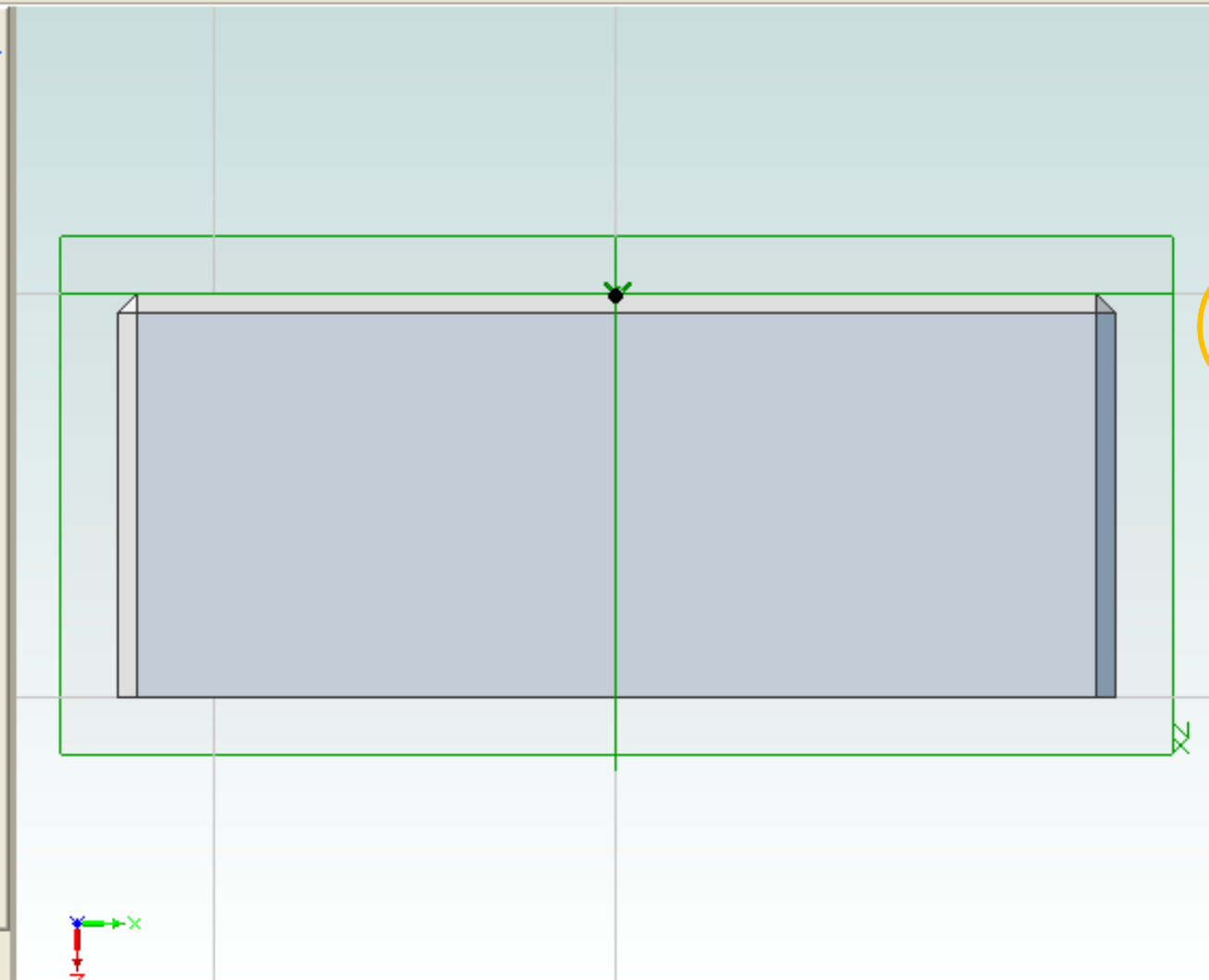




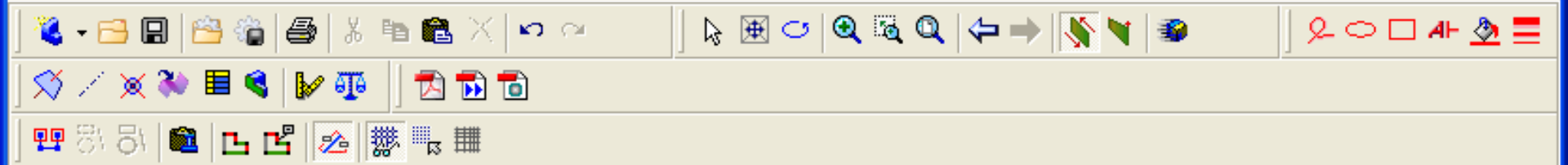


**Design Explorer**

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  - Origin
- └ Surfaces
- └ Redline Views
- └ Section Views
- └ Features
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- └ Edges
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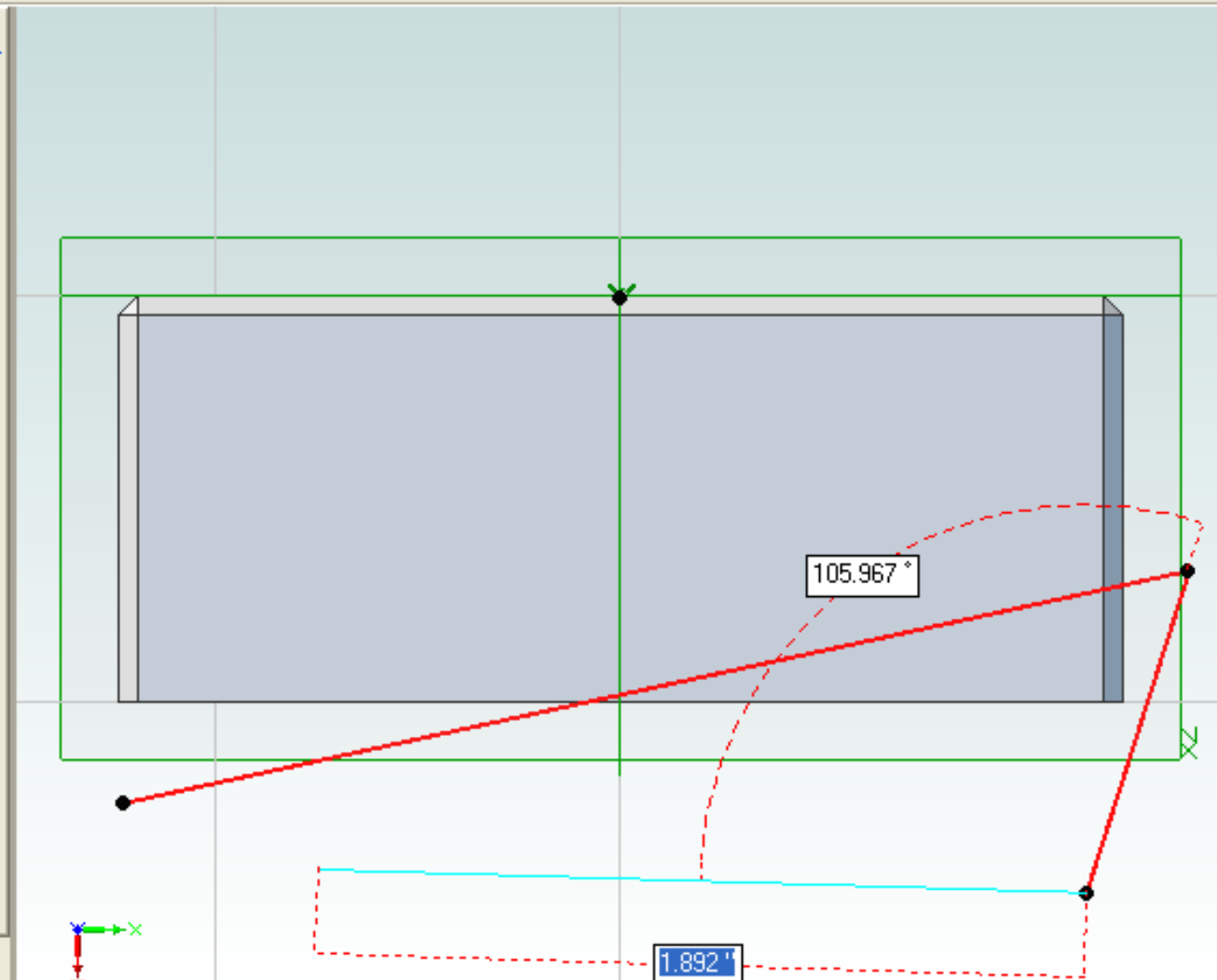


The vertical toolbar on the right contains icons for sketching (Line, Circle, Arc, Rectangle, Polygon, Ellipse, Fillet, Chamfer, Dimension, Constraint), editing (Move, Rotate, Scale, Mirror, Hide, Show, Lock, Unlock), and other tools (Delete, Undo, Redo, Copy, Paste, Print, Save, Open, New).

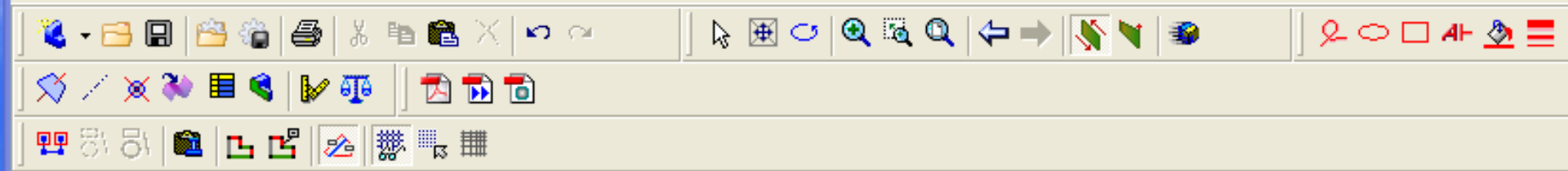


**Design Explorer**

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- └ Surfaces
- └ Redline Views
- └ Section Views
- └ Features
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    - Sketch<1>
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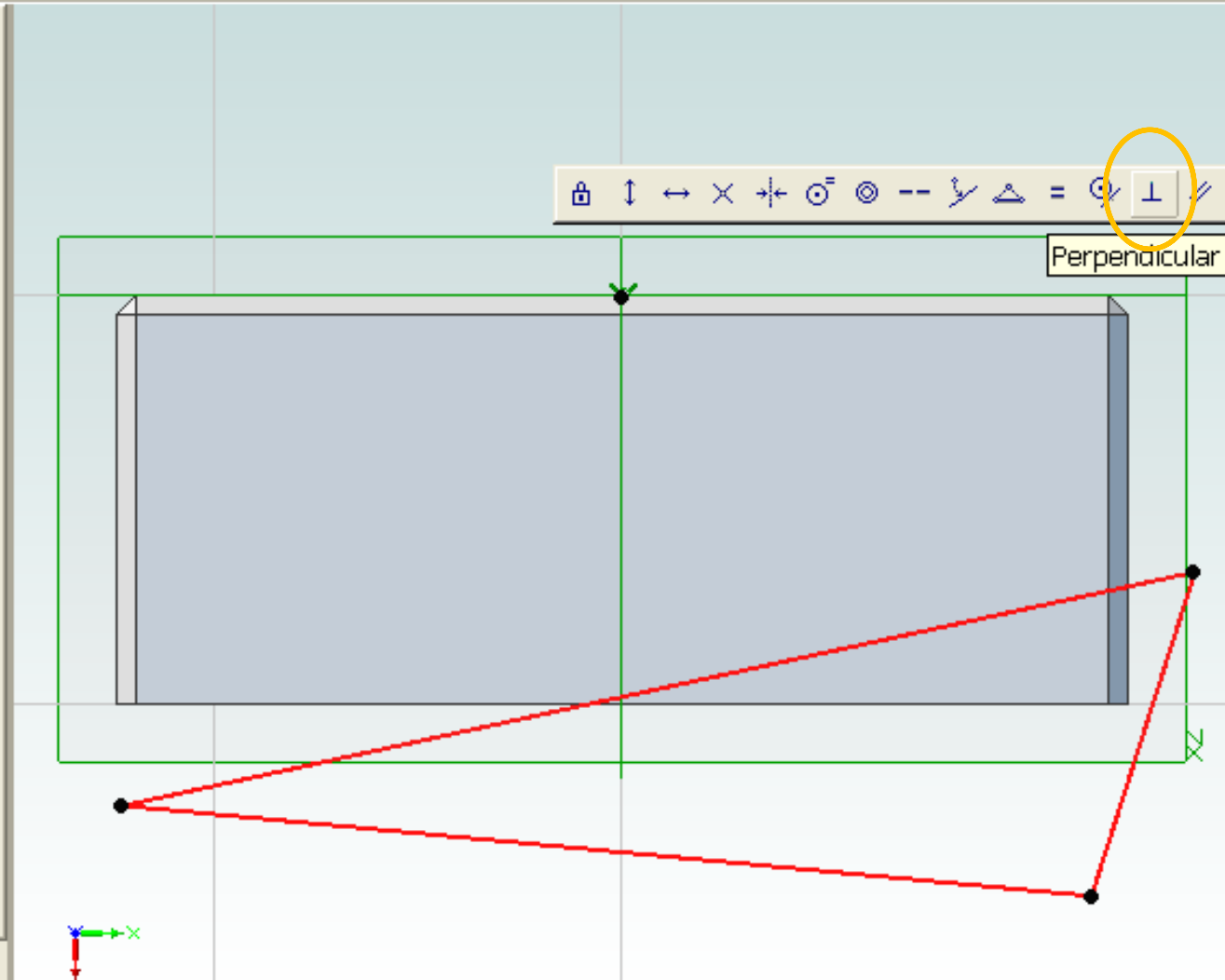






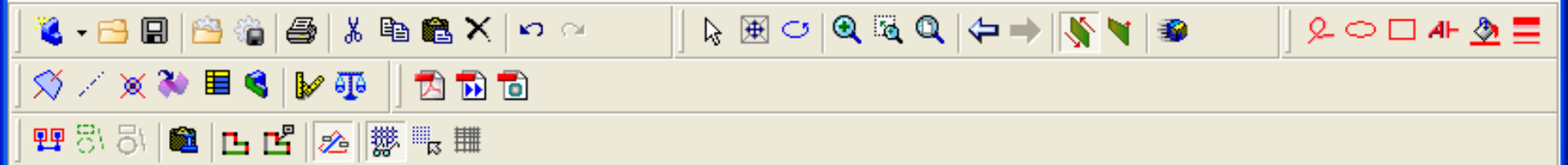
**Design Explorer**

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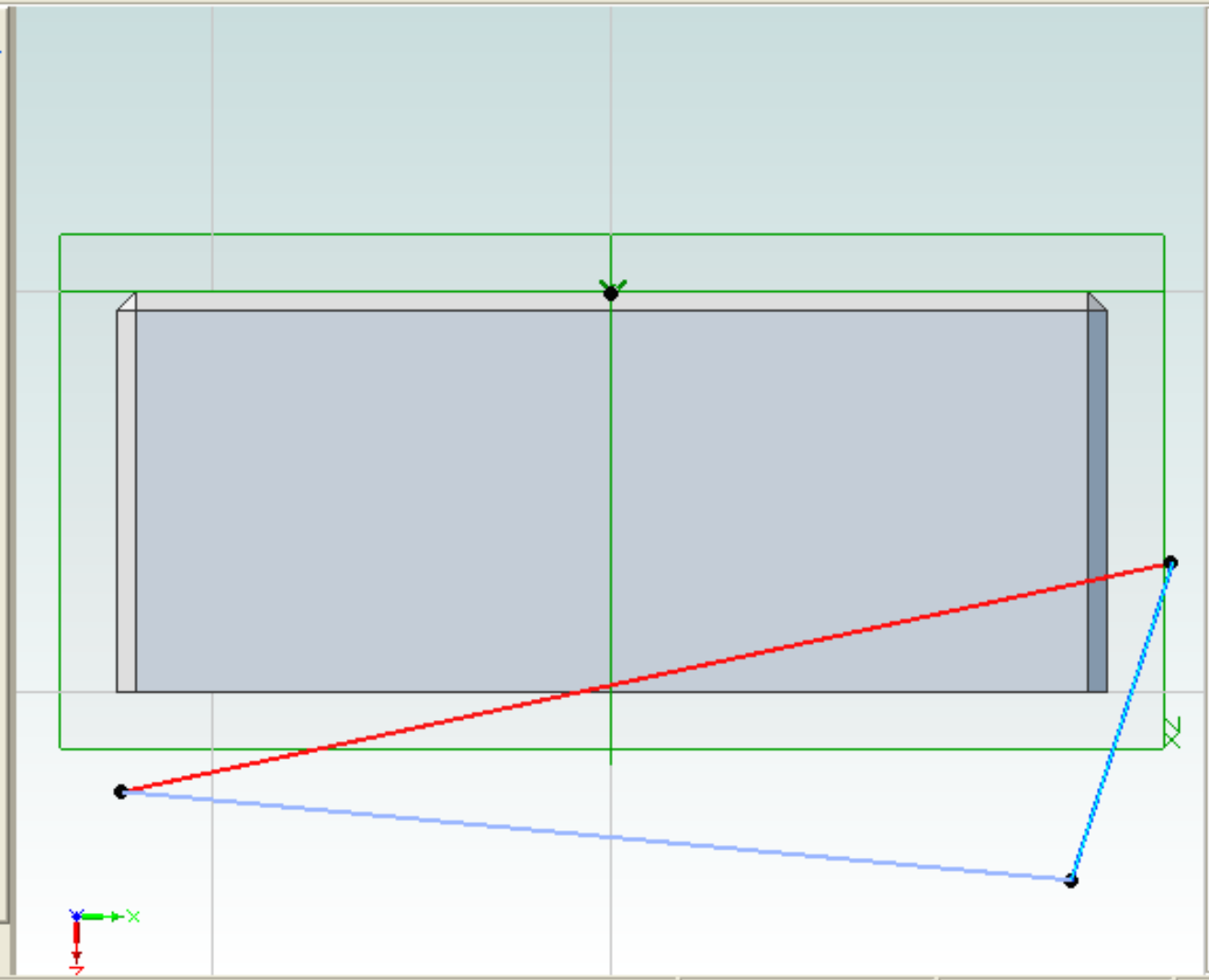
Perpendicular Constraint

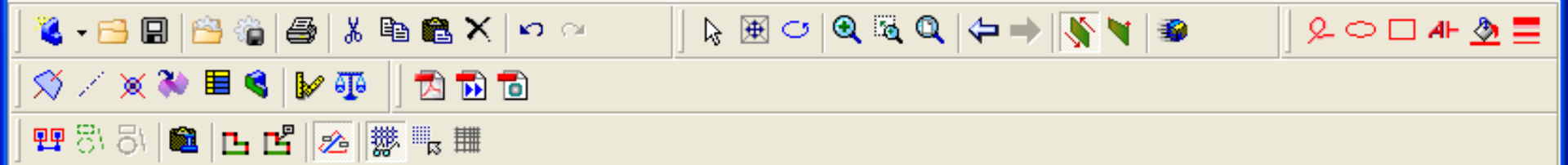
The right-side toolbar contains icons for sketching (Line, Circle, Arc, Ellipse, Rectangle, Polygon, Polyline, Spline, Fillet, Chamfer), modeling (Extrude, Revolve, Sweep, Loft, Mirror, Offset, Fillet, Chamfer), and other tools (Delete, Undo, Redo, Undo, Redo).



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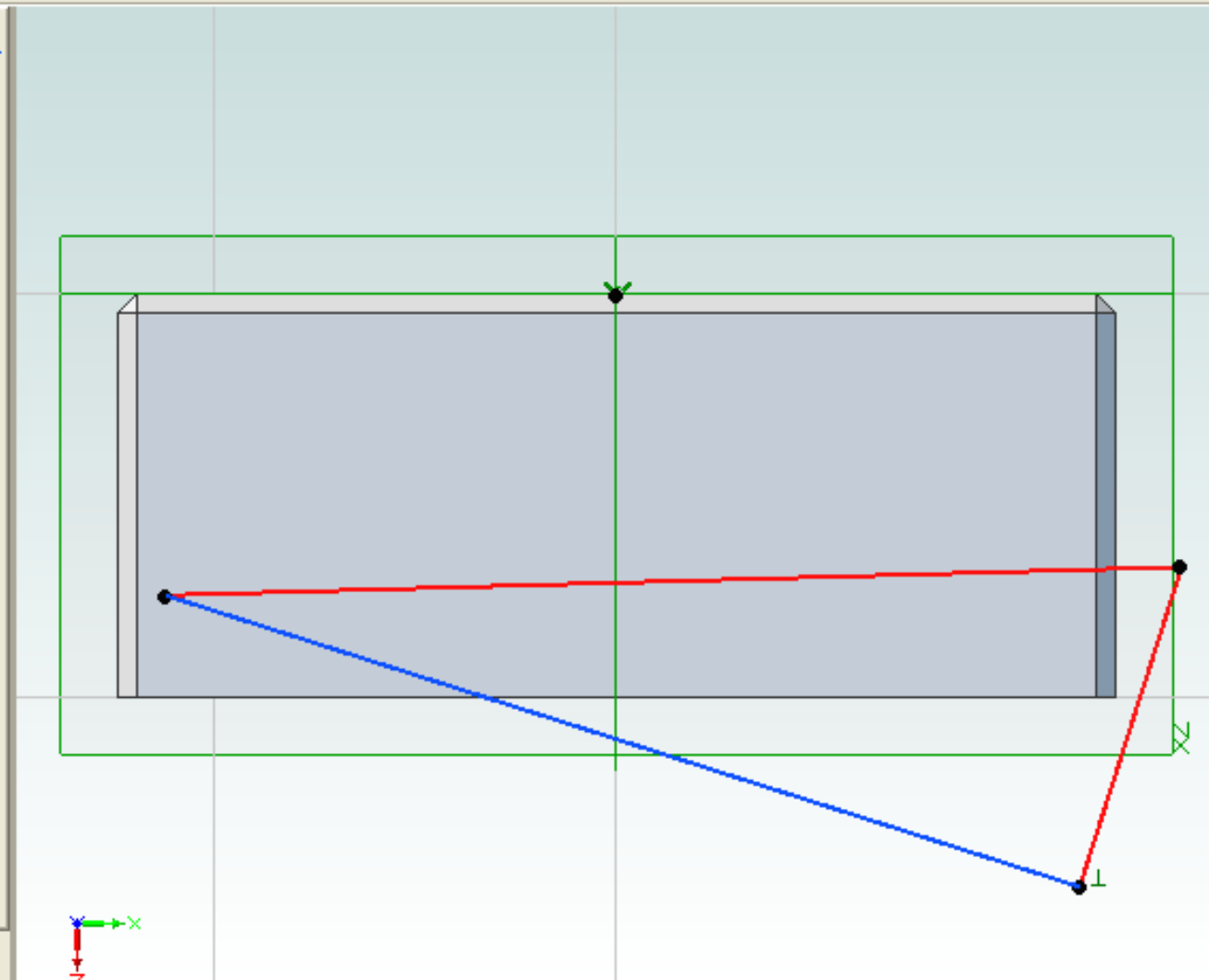
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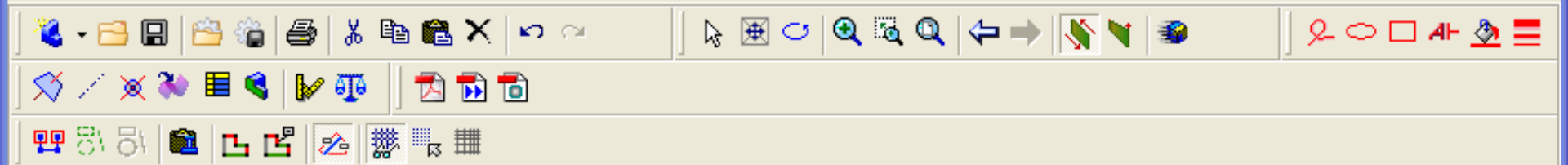




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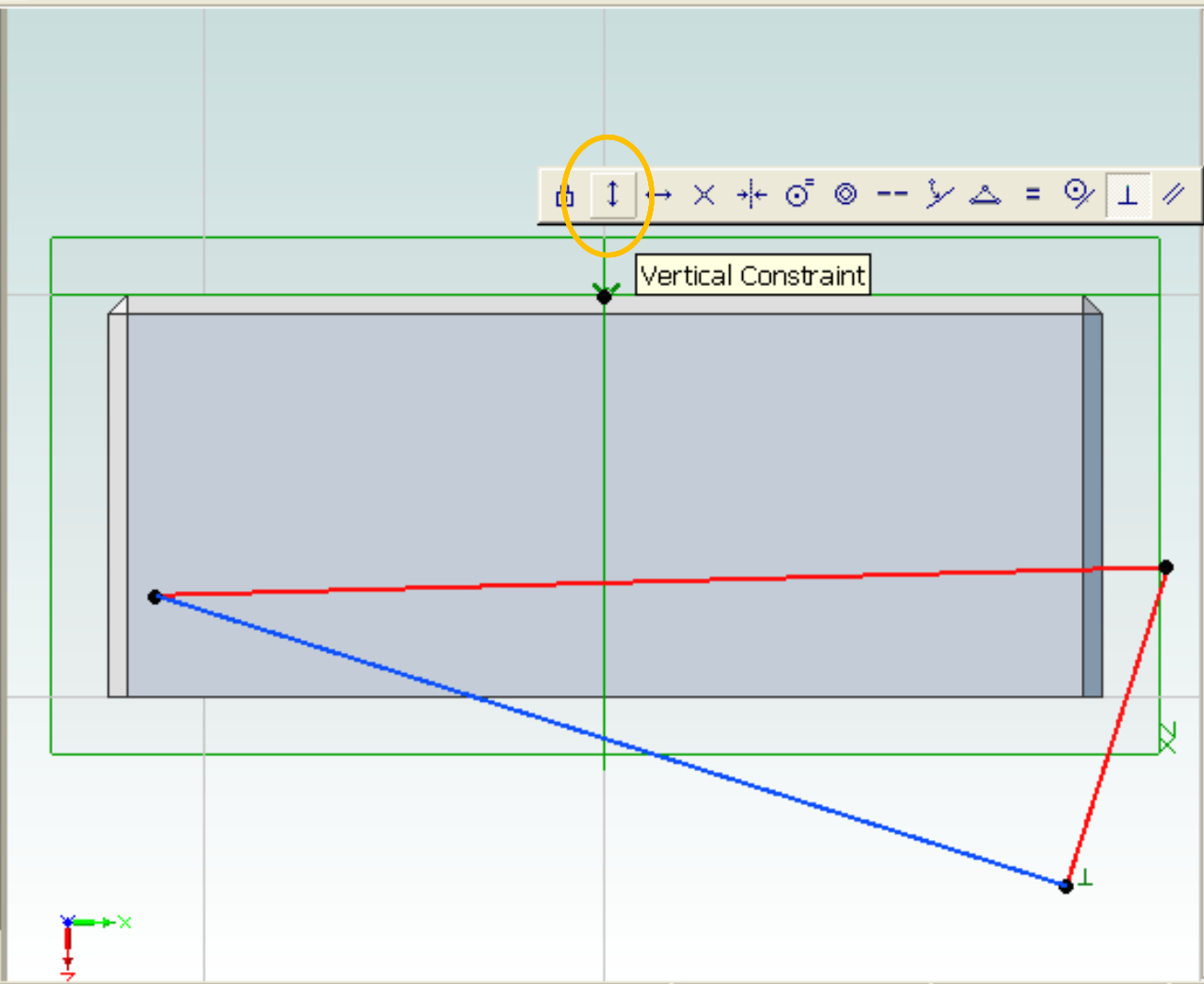
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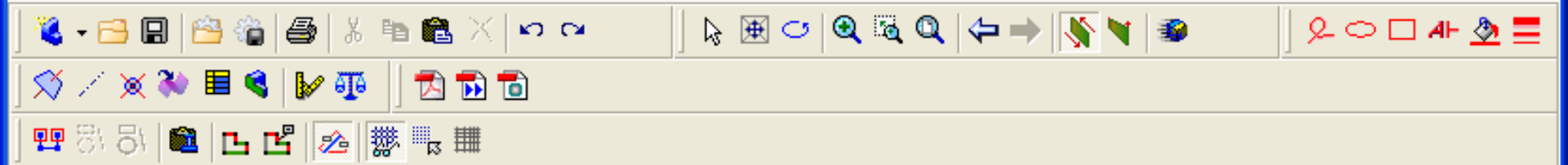




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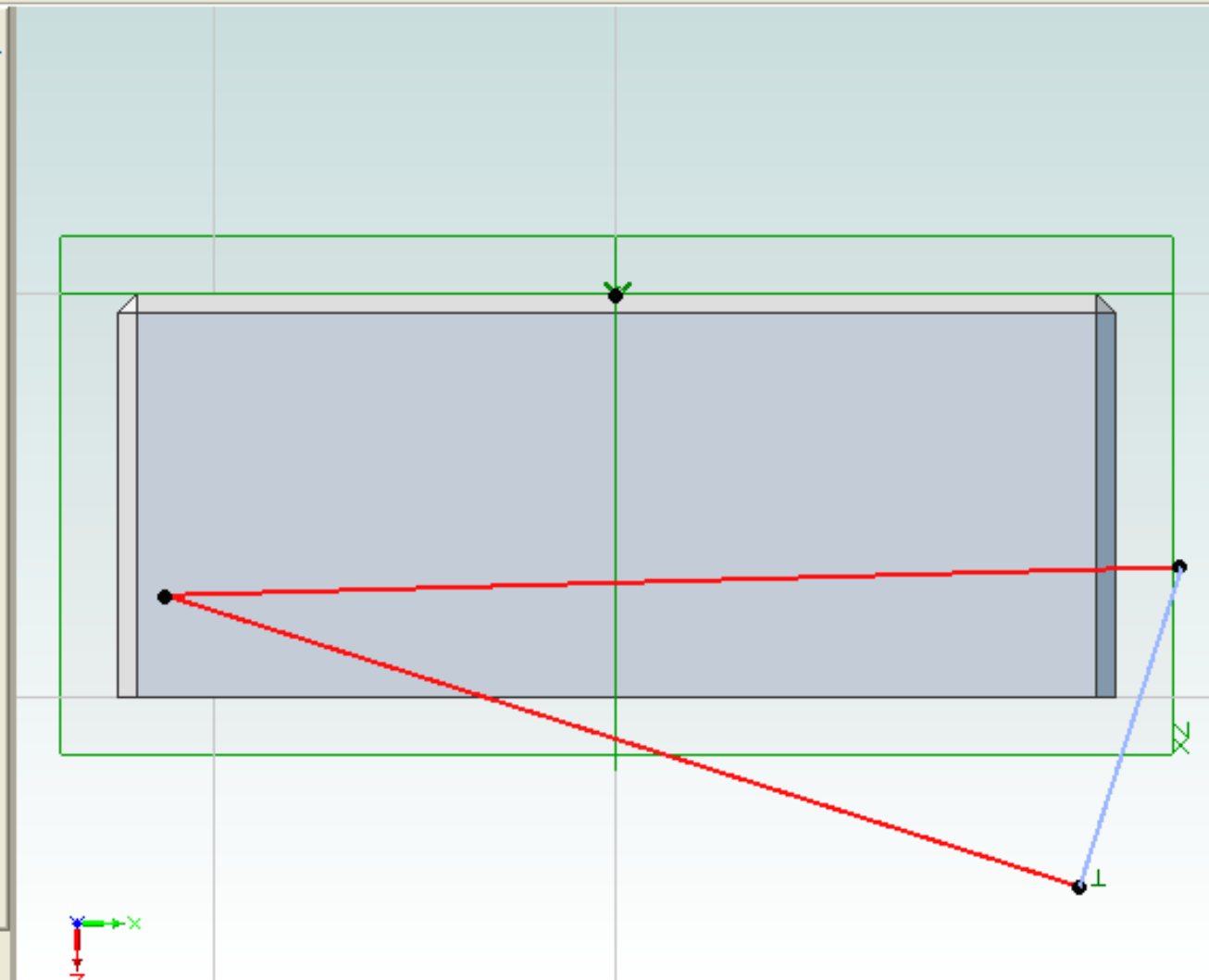
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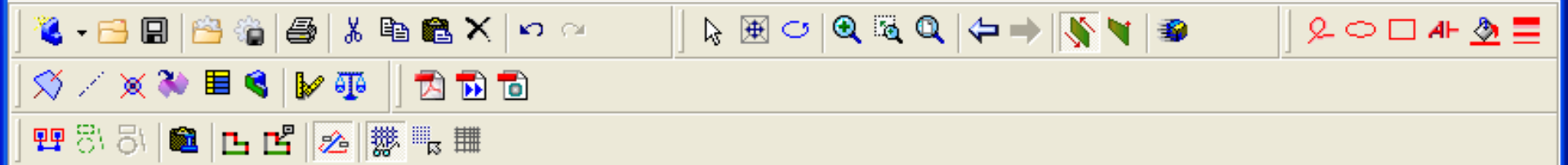


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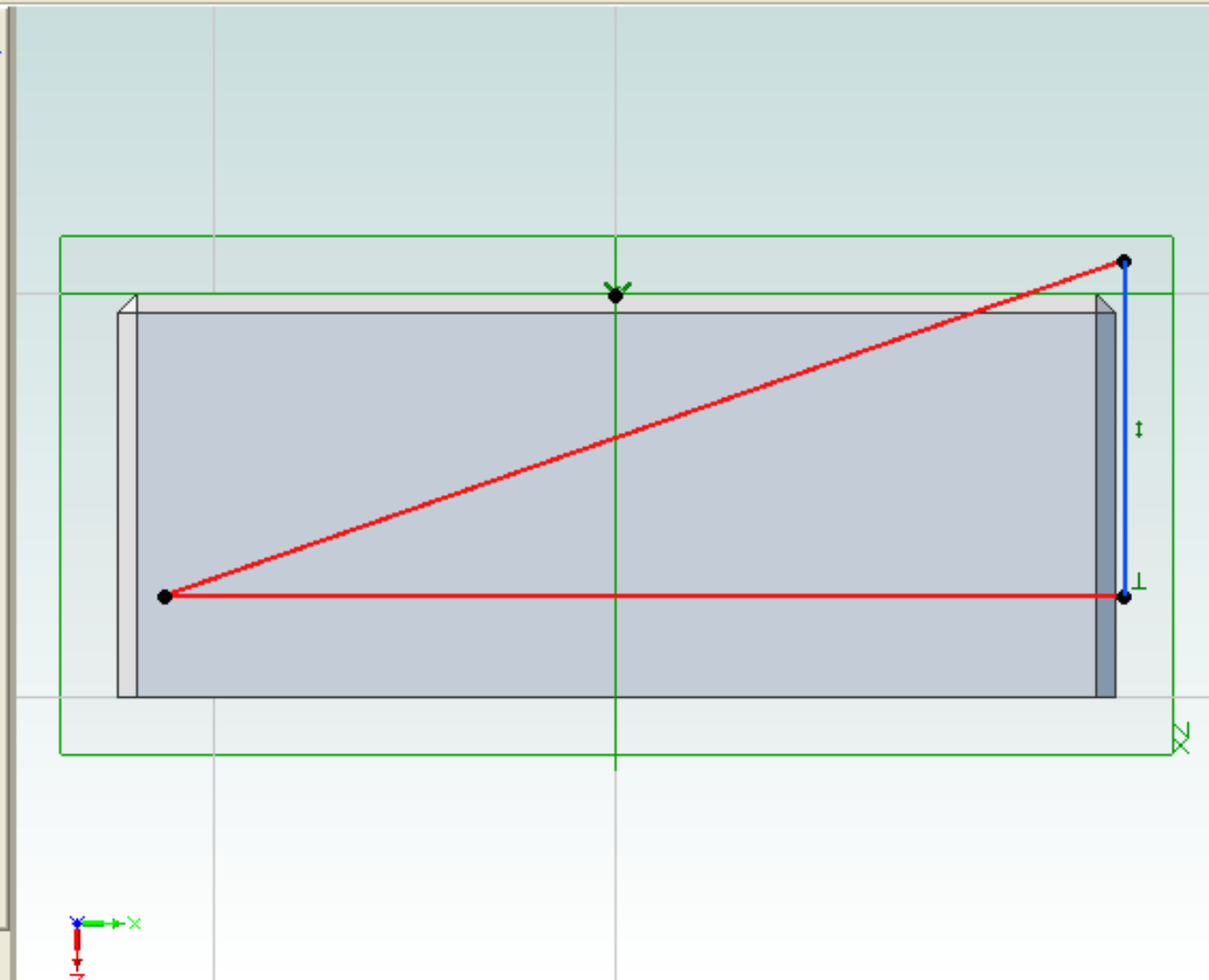




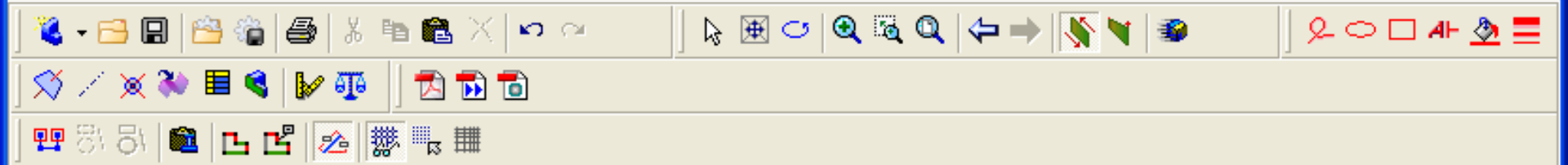


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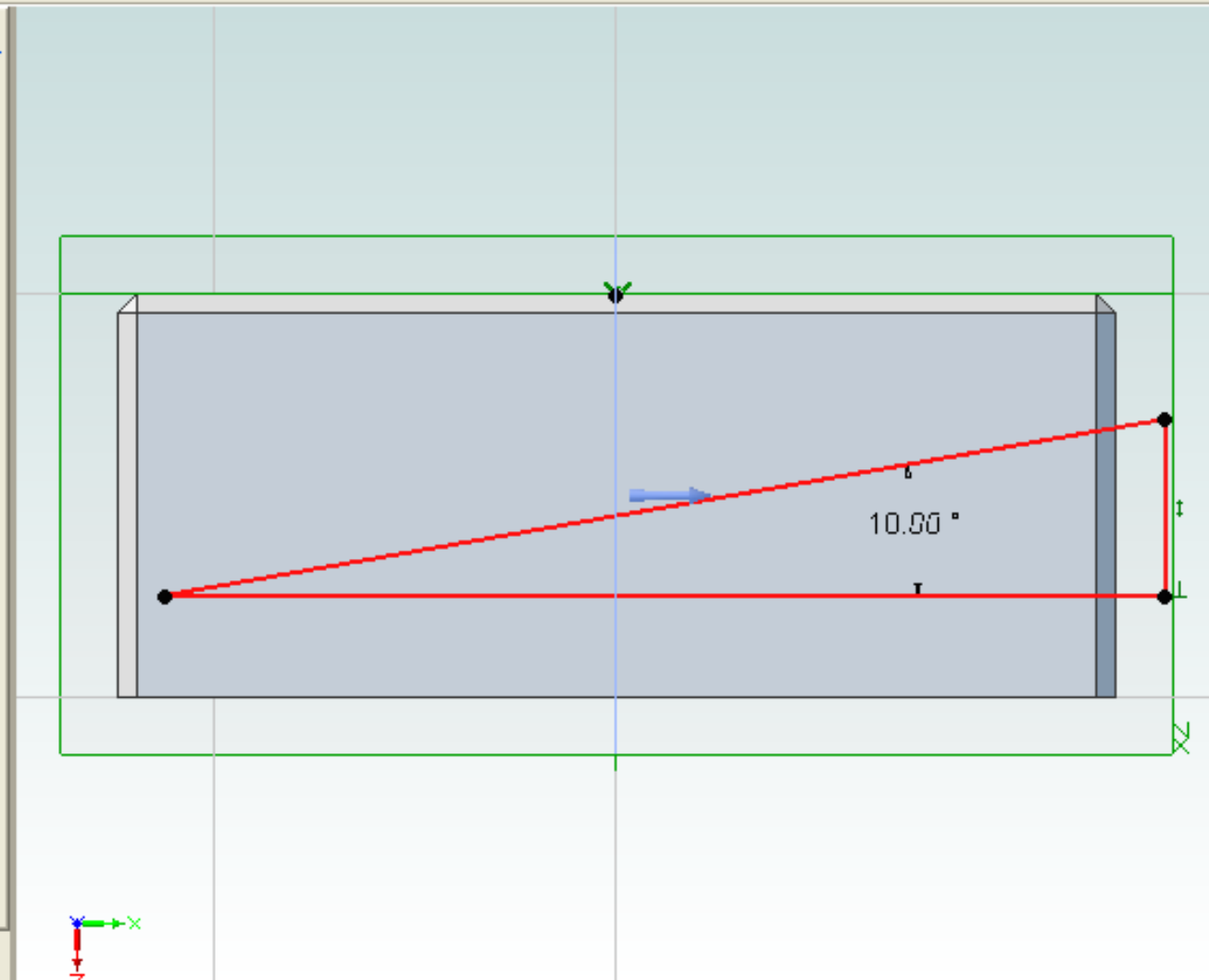


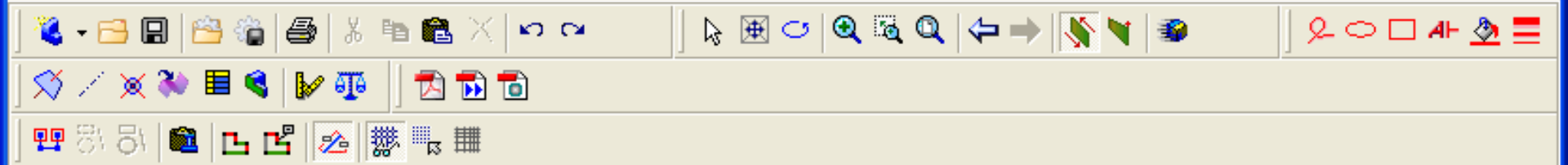




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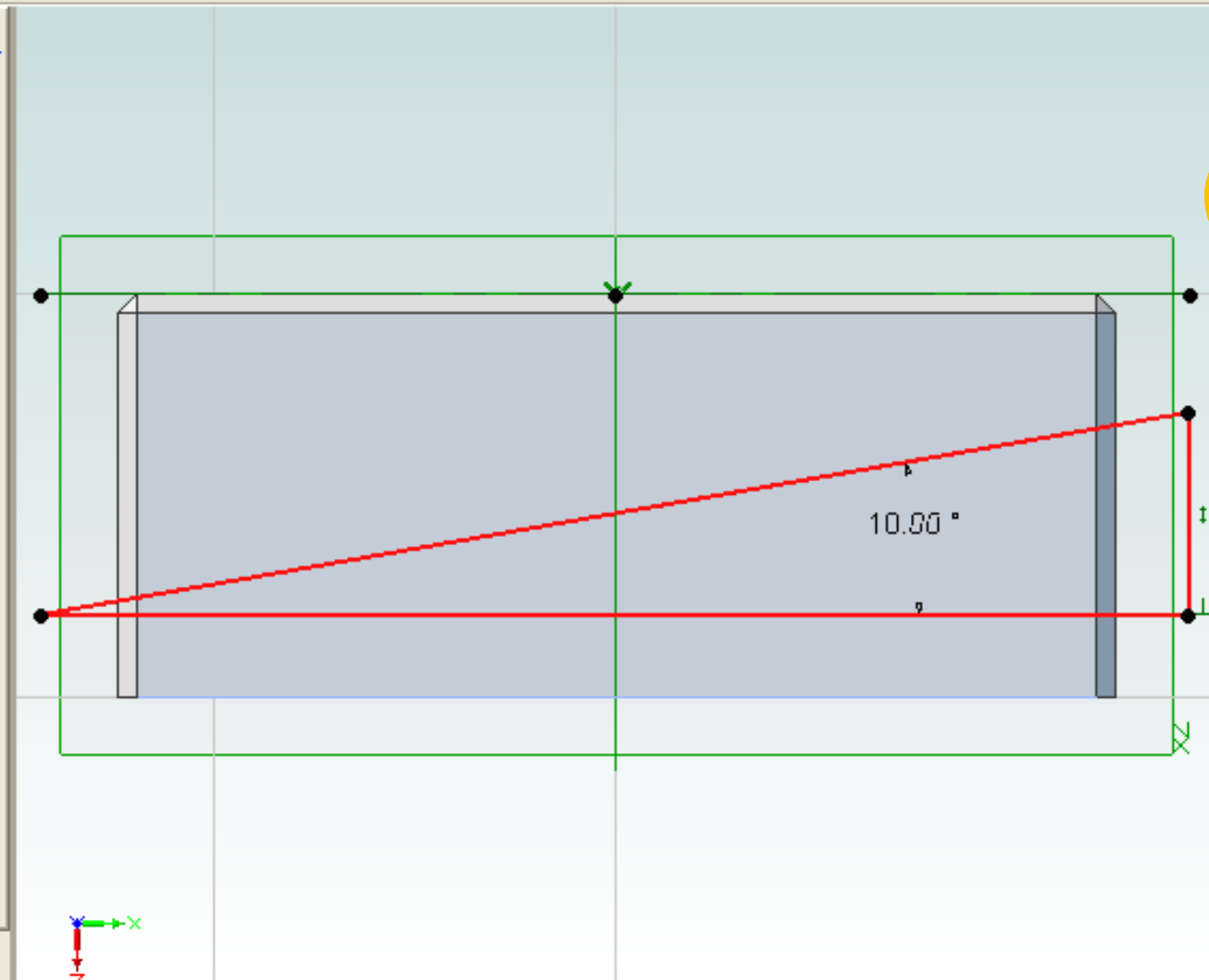
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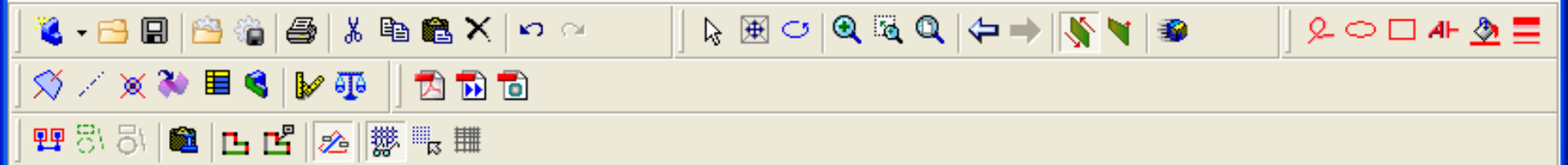




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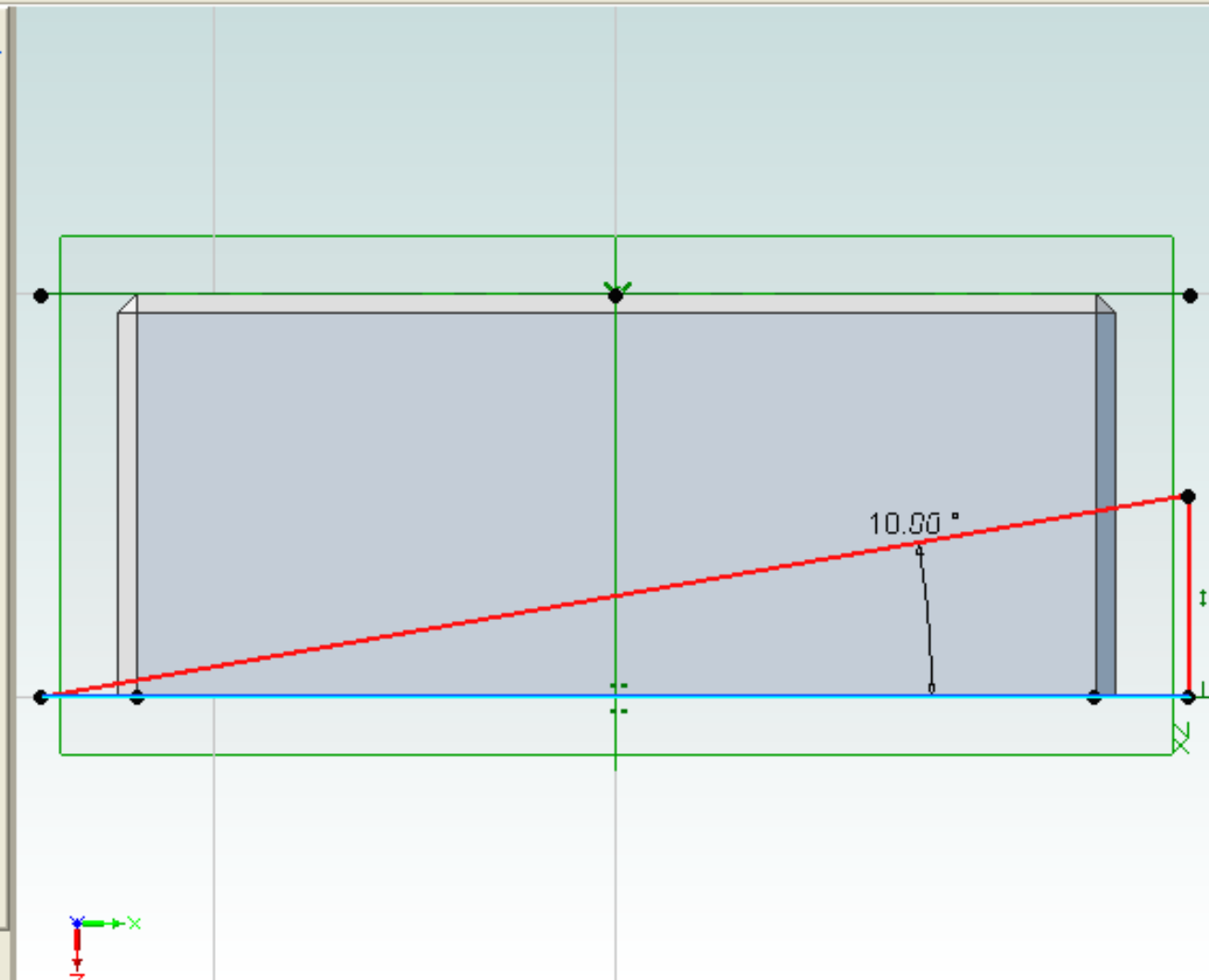
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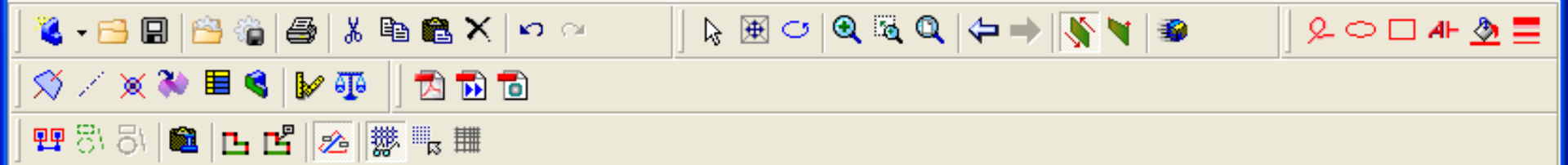




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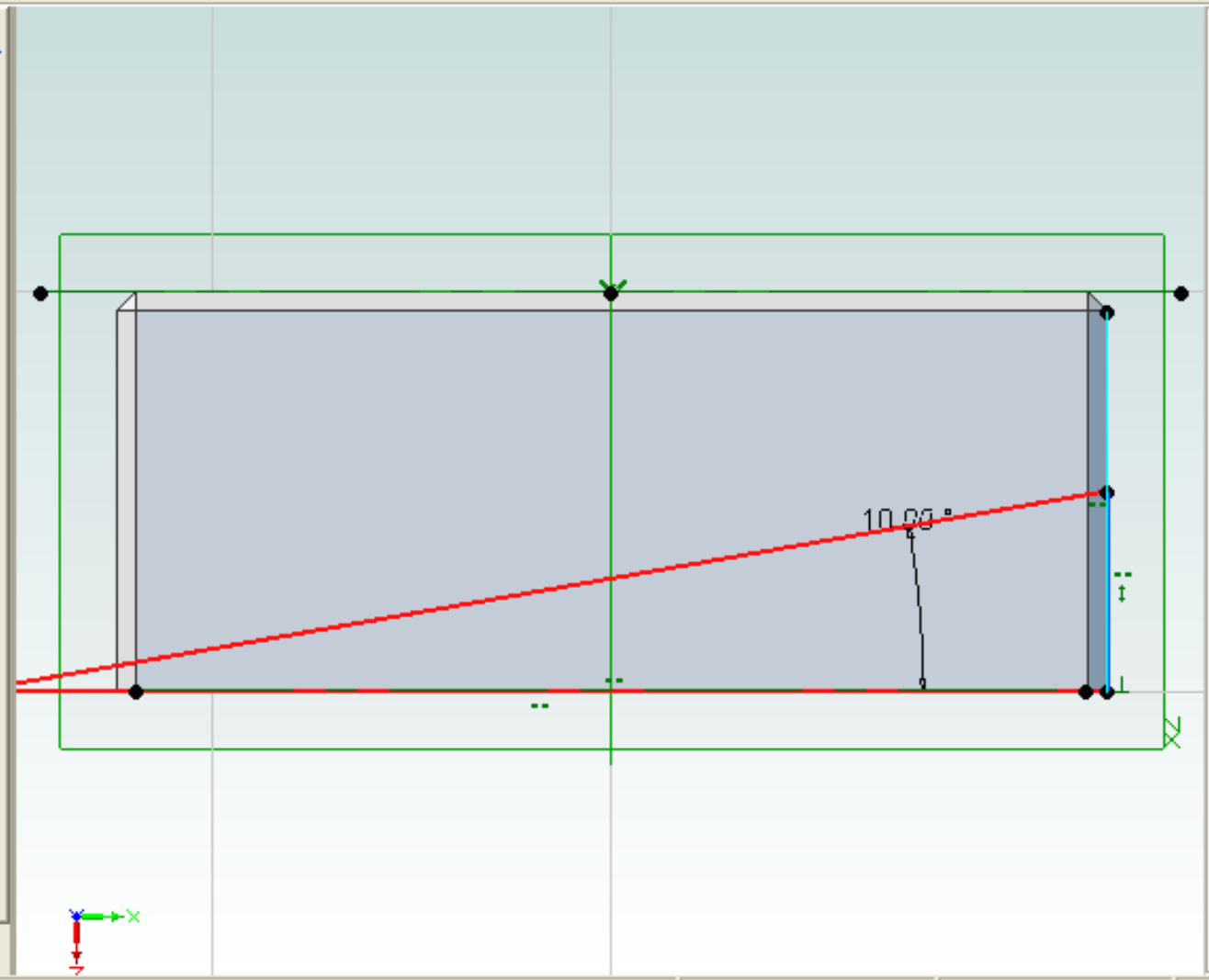
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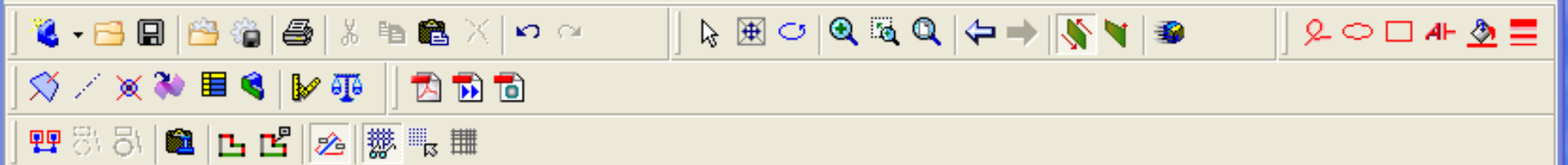




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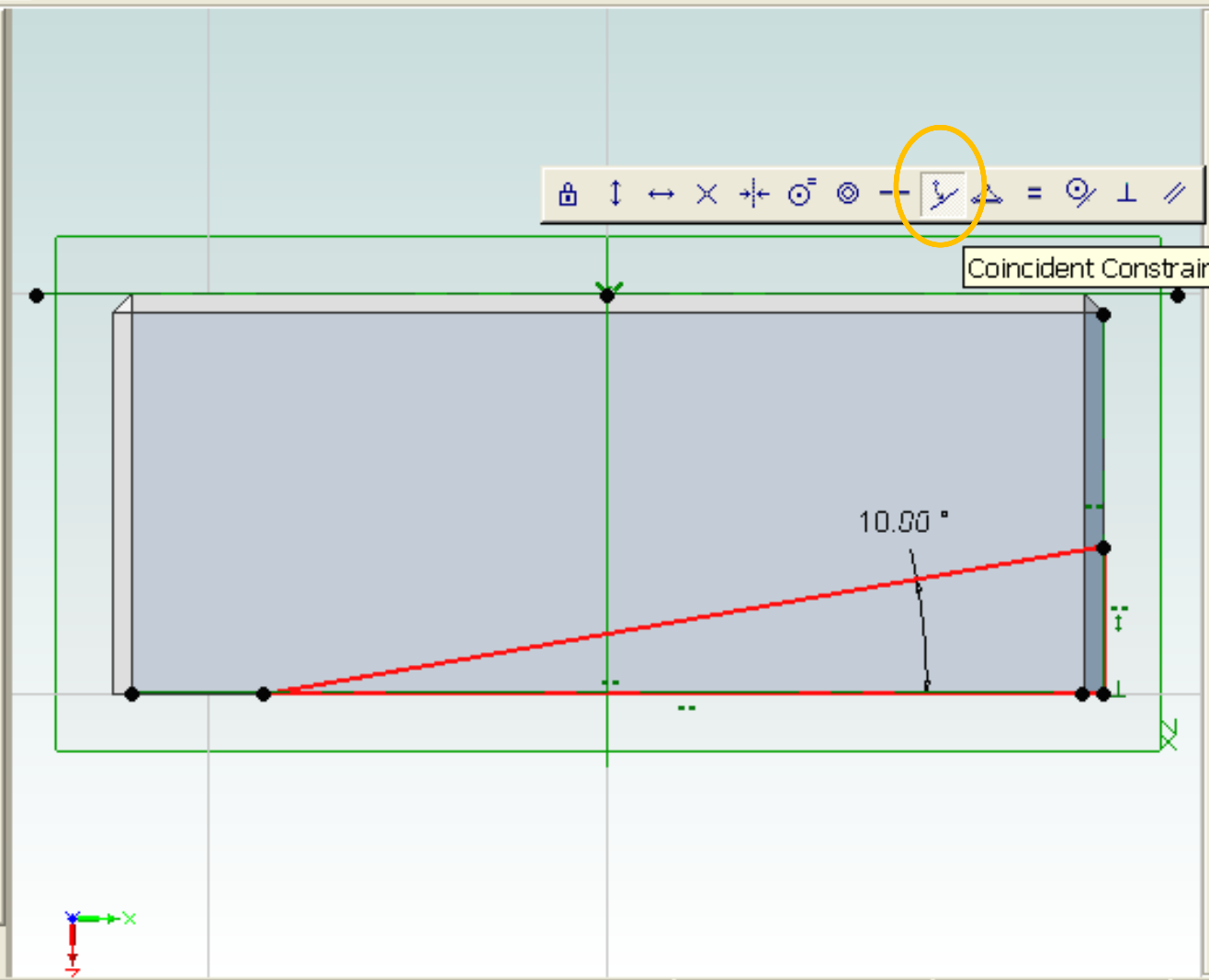
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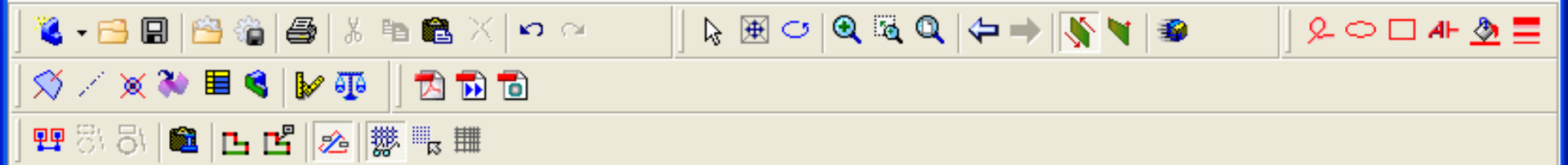




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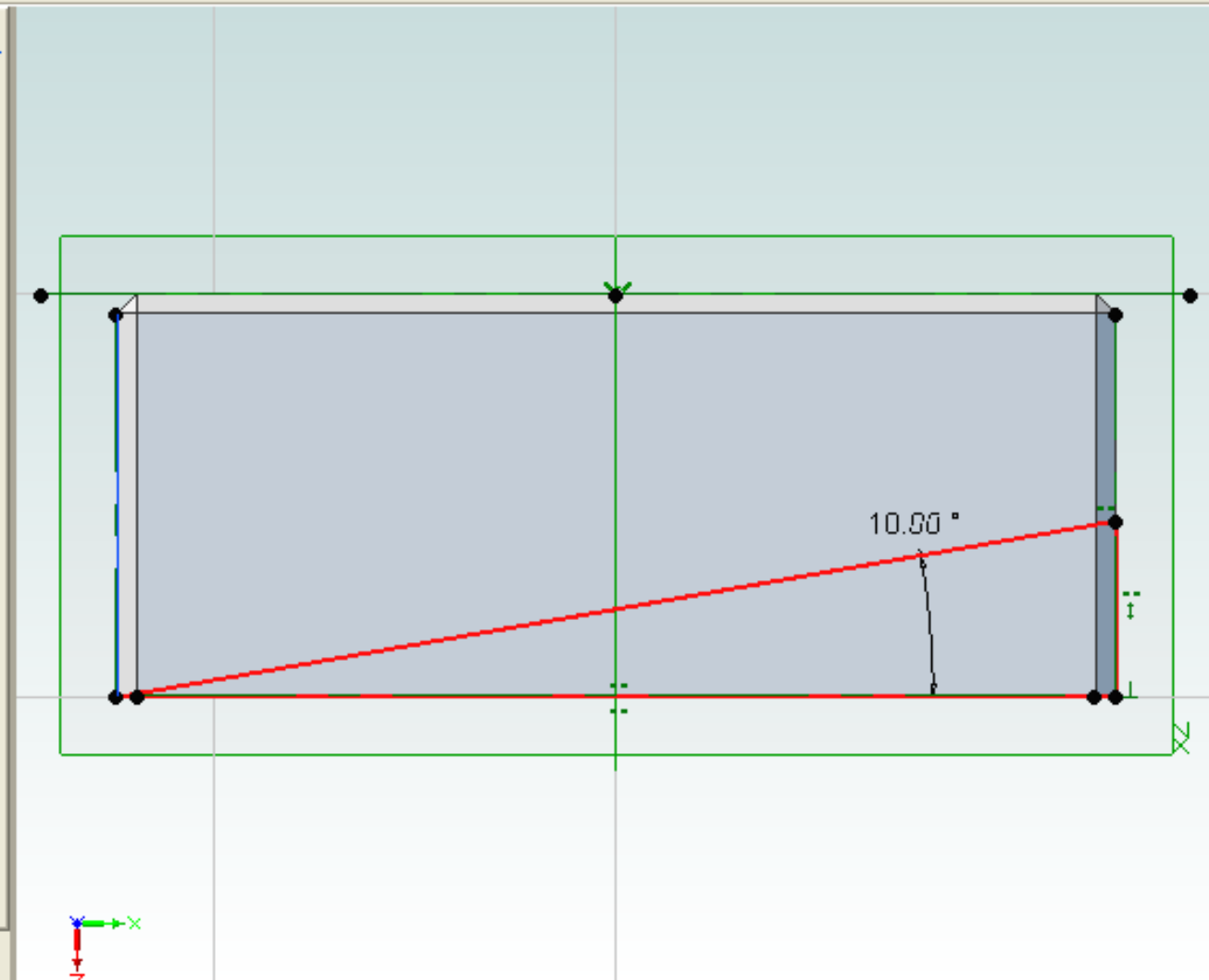
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**Design Explorer**

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  - Mirror<3>
  - Mirror<4>
  - Edge Chamfer<5>
  - Sketch<3>
- └ Edges







# Extrude Cut



## Sketch

 Sketch<3>

## Direction

Along Normal

Select

## Draft Angle

0

Outward

## Type:

To Depth

## Depth

1.000 "

Reverse

## To Geometry

Target:

Offset:

.000 "

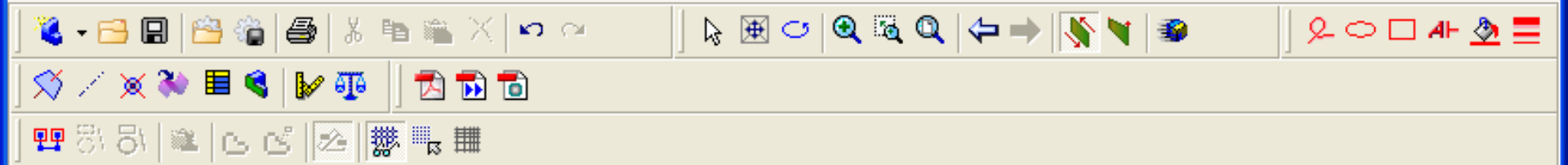
Label:

Extrusion<6>

OK

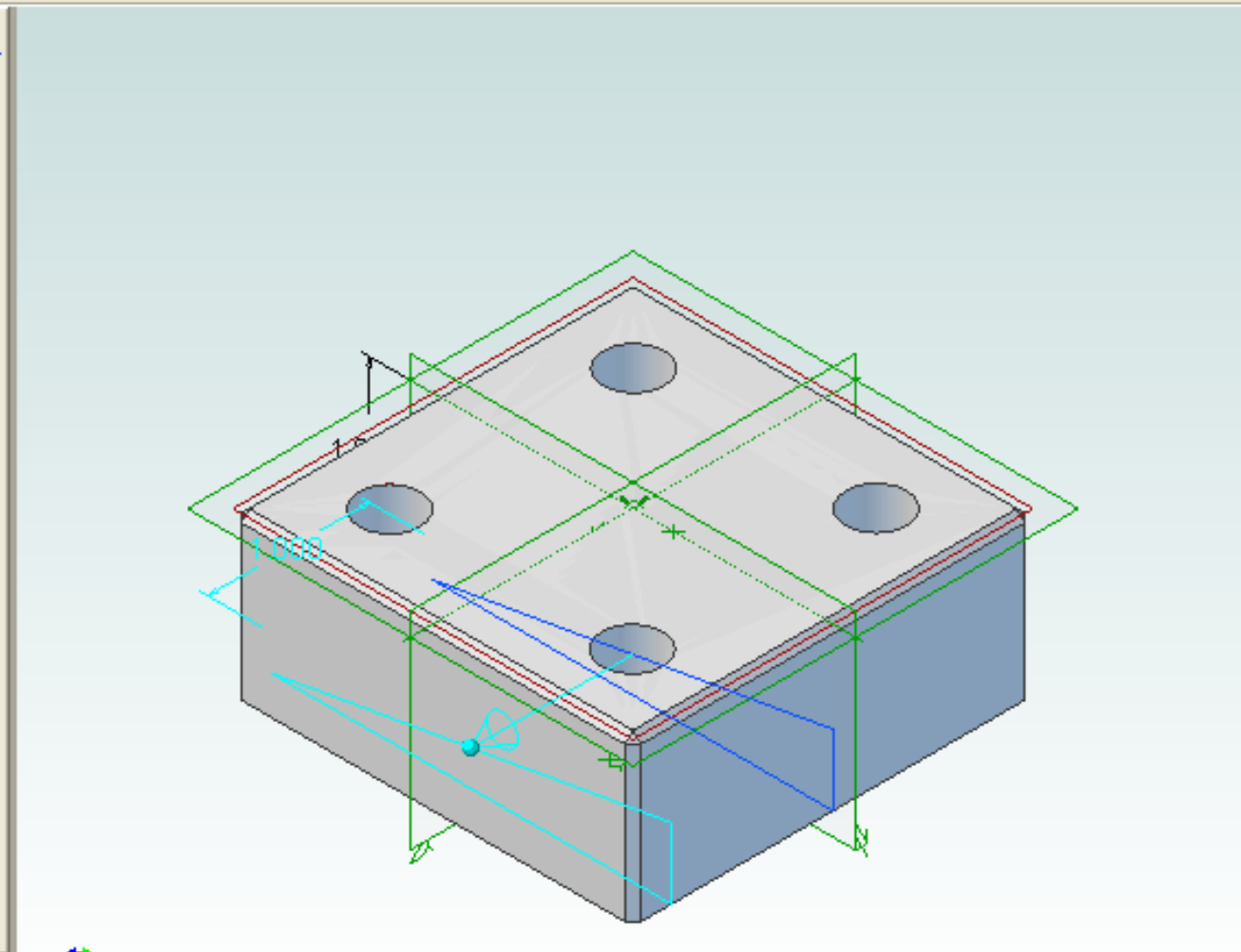
Cancel





**Design Explorer**

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    - Sketch<2>
  - └ Mirror<3>
  - └ Mirror<4>
  - └ Edge Chamfer<5>
  - └ Sketch<3>
- └ Edges





# Extrude Cut



Sketch

Sketch<3>

Direction

Along Normal

Select

Draft Angle

0



Outward

Type:

To Depth



To Depth

**Through ALL**

Mid Plane

To Next

To Geometry

To Geometry

Target:

Offset:

.000"

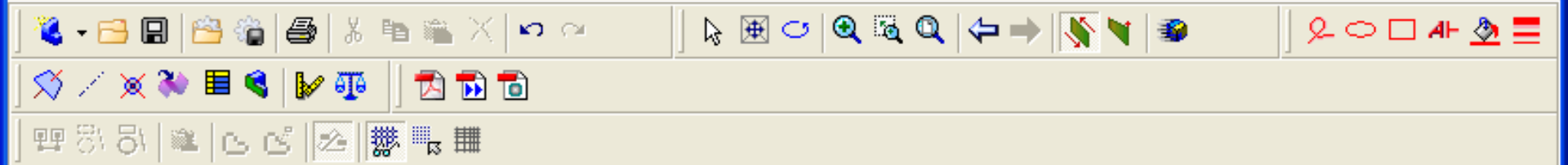
Label:

Extrusion<6>

OK

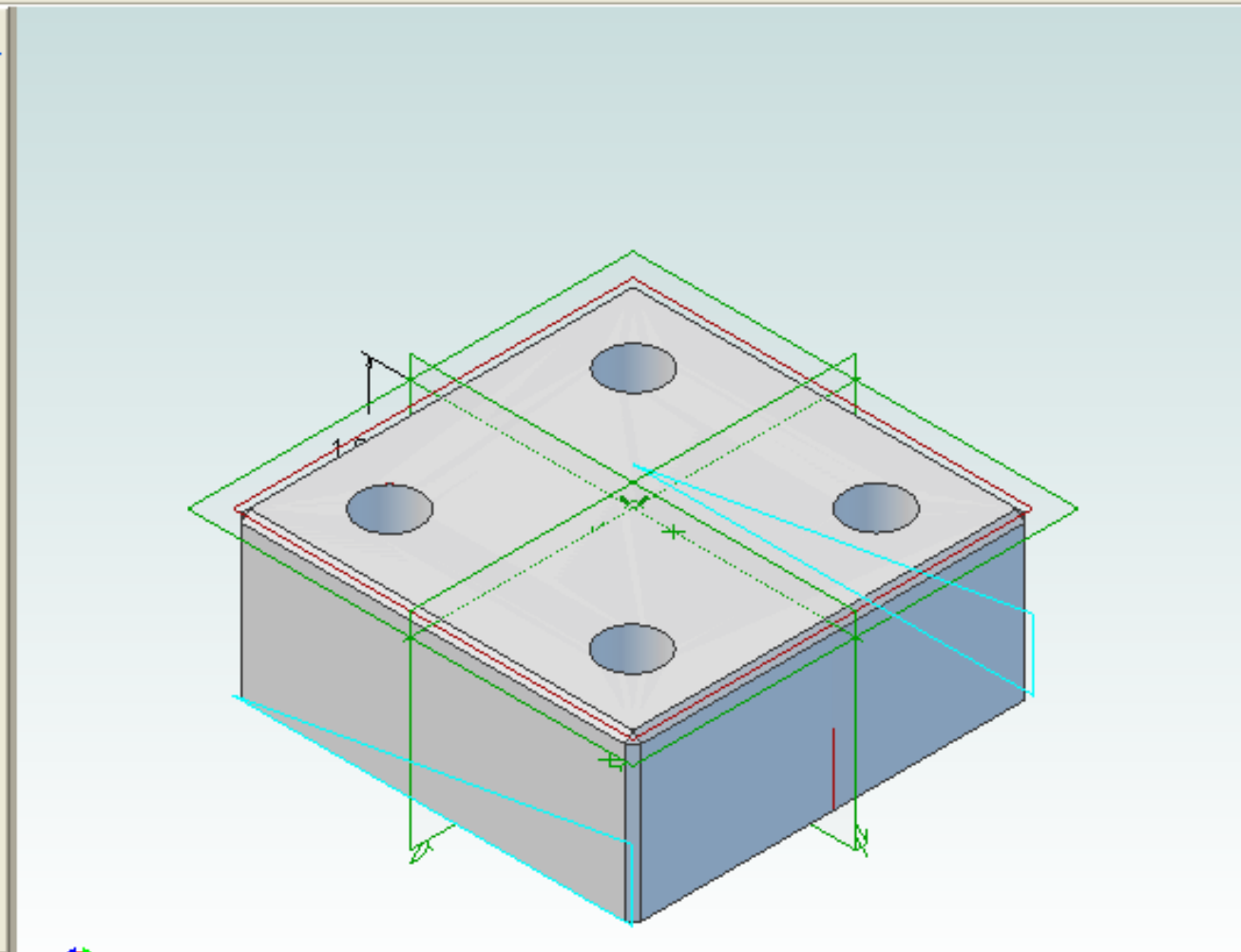
Cancel

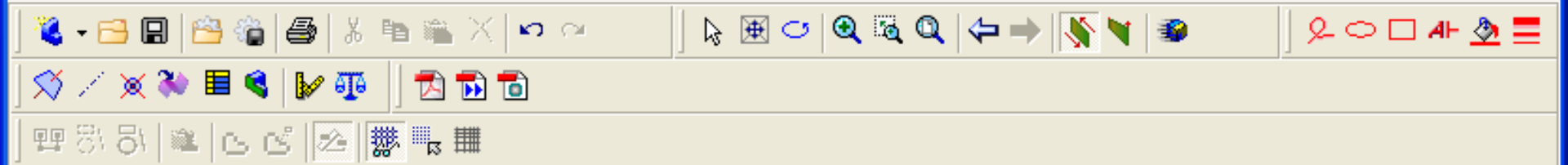




**Design Explorer**

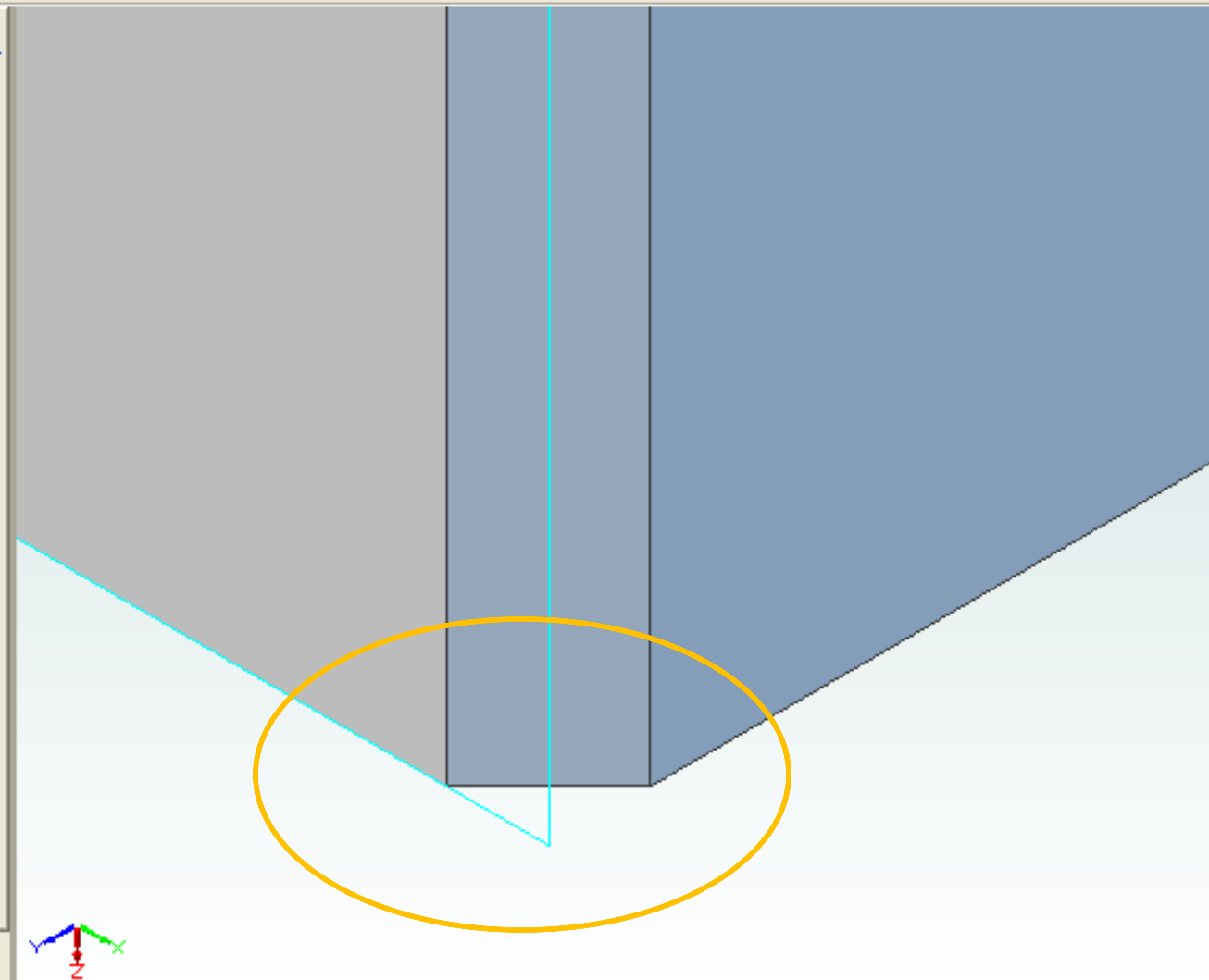
- Config<1>
- └ Axes
  - X-Axis
  - Y-Axis
  - Z-Axis
- └ Planes
  - XY-Plane
  - YZ-Plane
  - ZX-Plane
- └ Points
  - Origin
- └ Surfaces
- └ Redline Views
- └ Section Views
- └ Features
  - Extrusion<1>
    - Sketch<1>
  - Extrusion<2>
    - Sketch<2>
  - Mirror<3>
  - Mirror<4>
  - Edge Chamfer<5>
    - Sketch<3>
- └ Edges





### Design Explorer

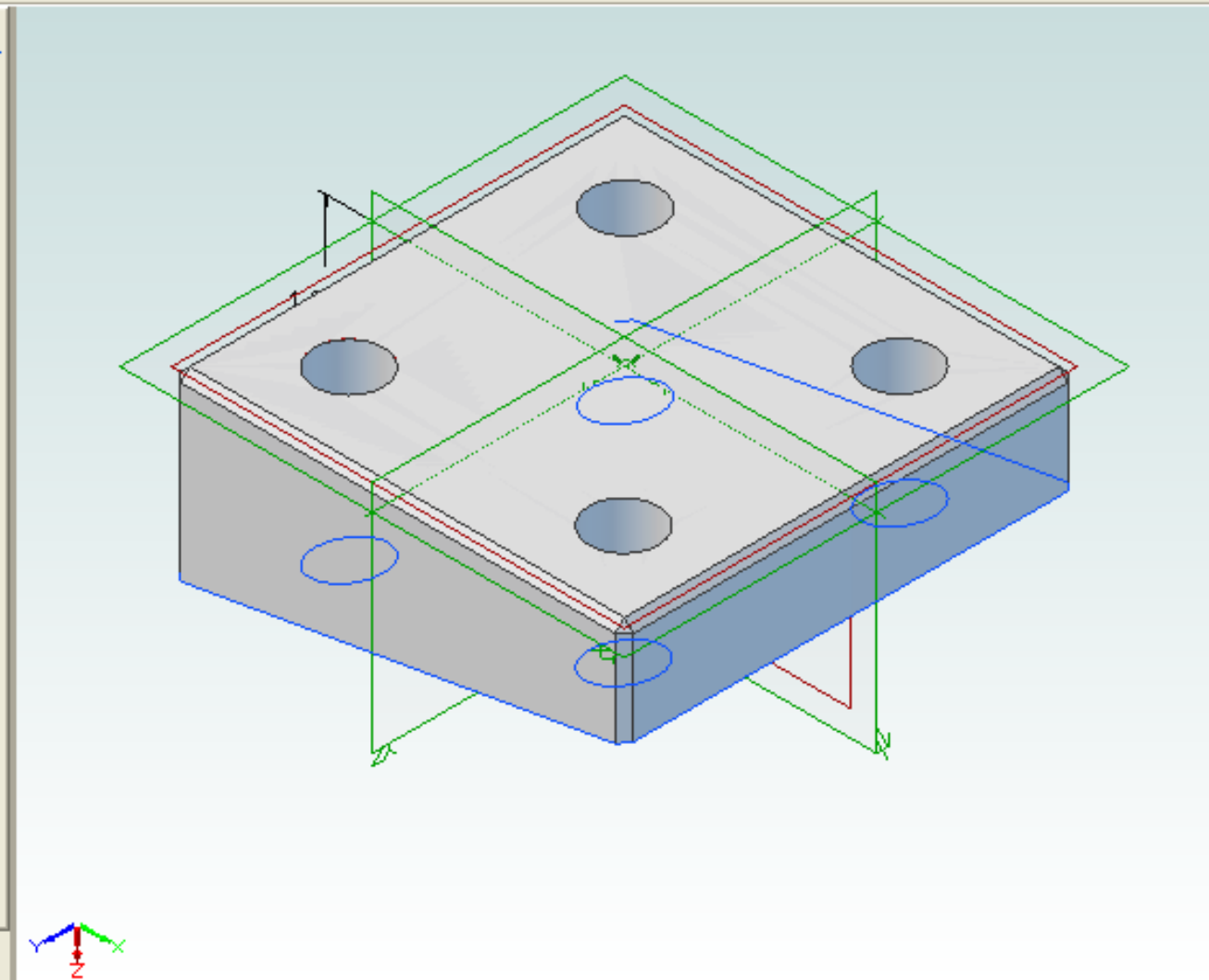
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**Design Explorer**

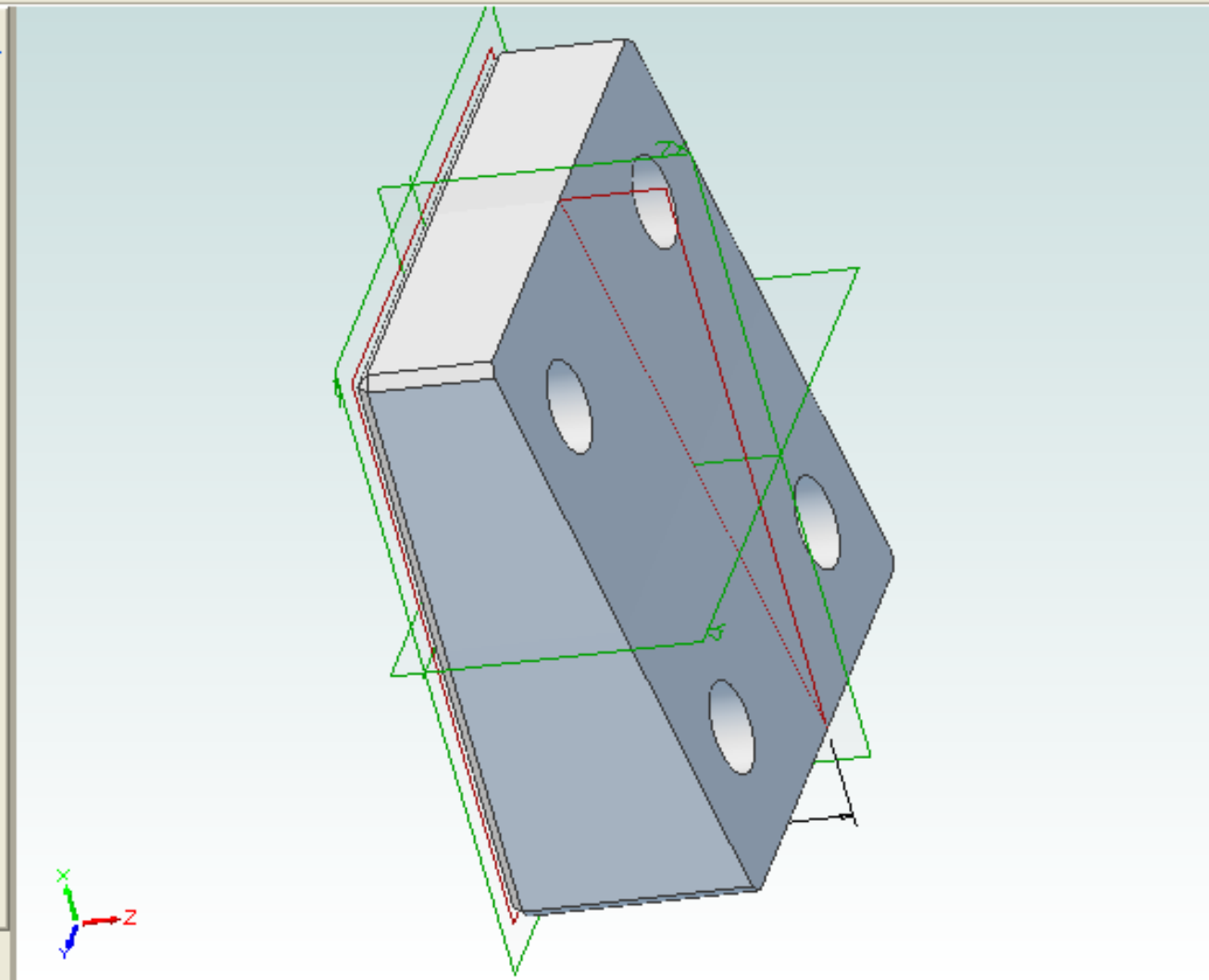
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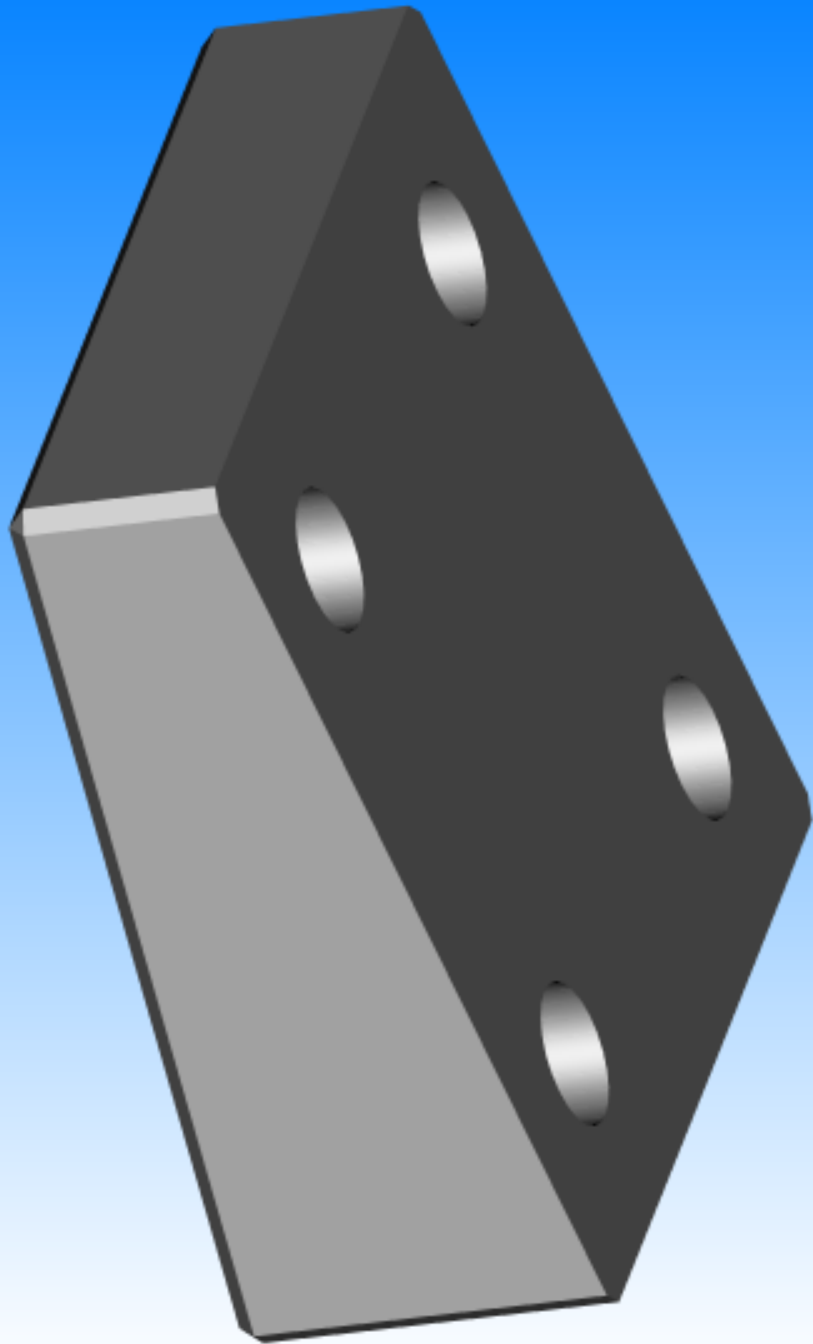




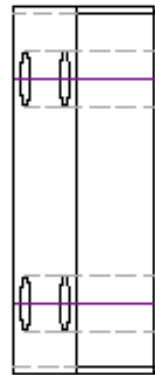
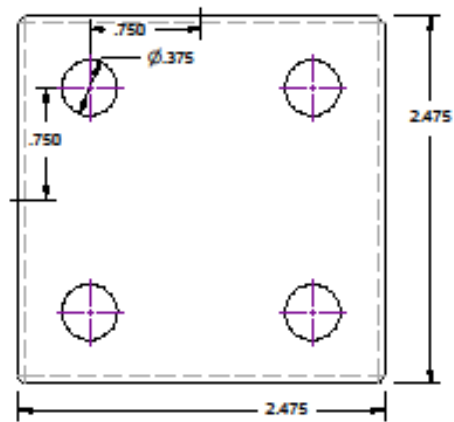
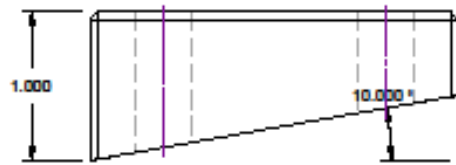
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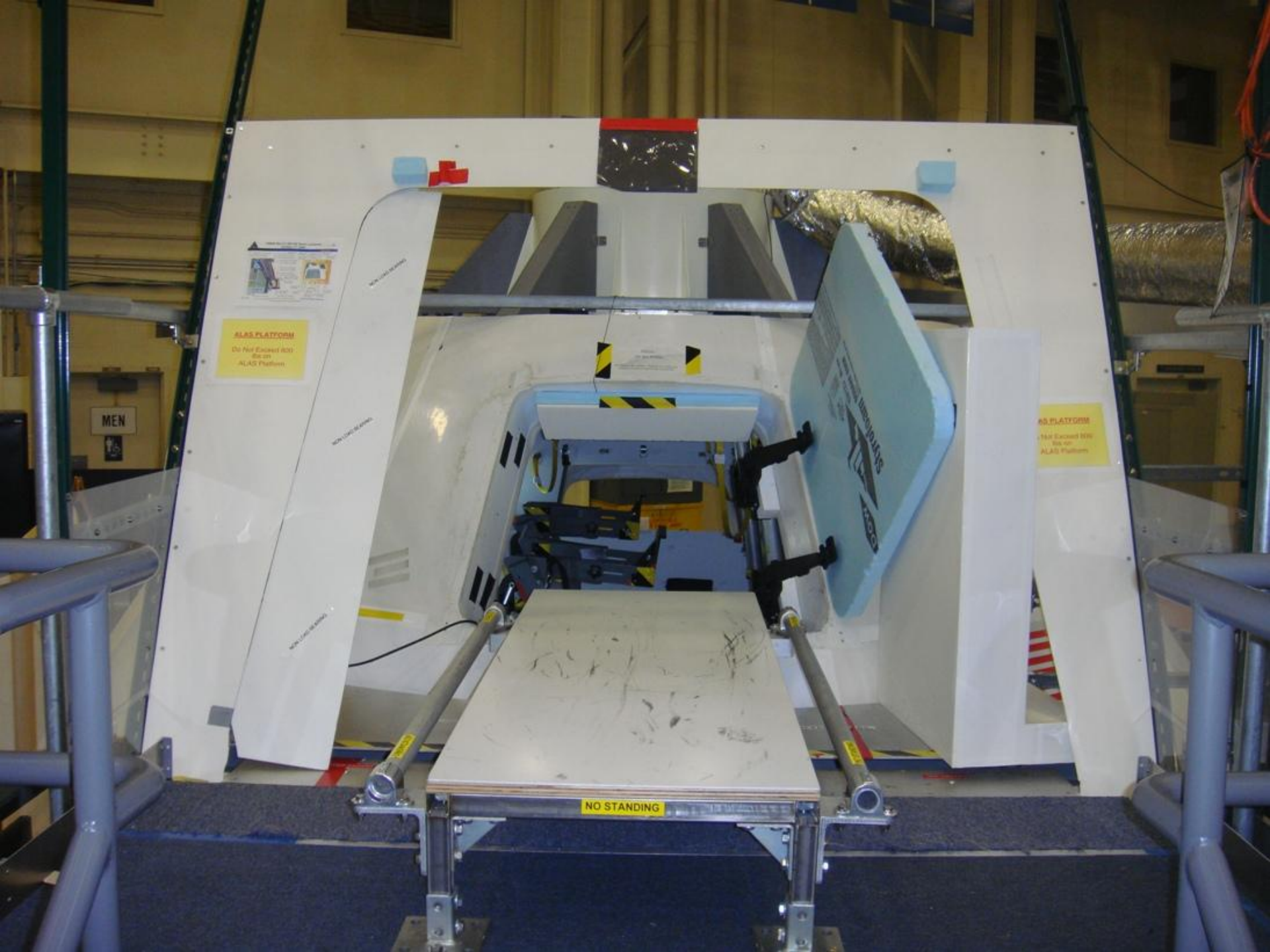






FLY ME TO THE MOON





ALAS PLATFORM

Do Not Exceed 500  
lbs on  
ALAS Platform

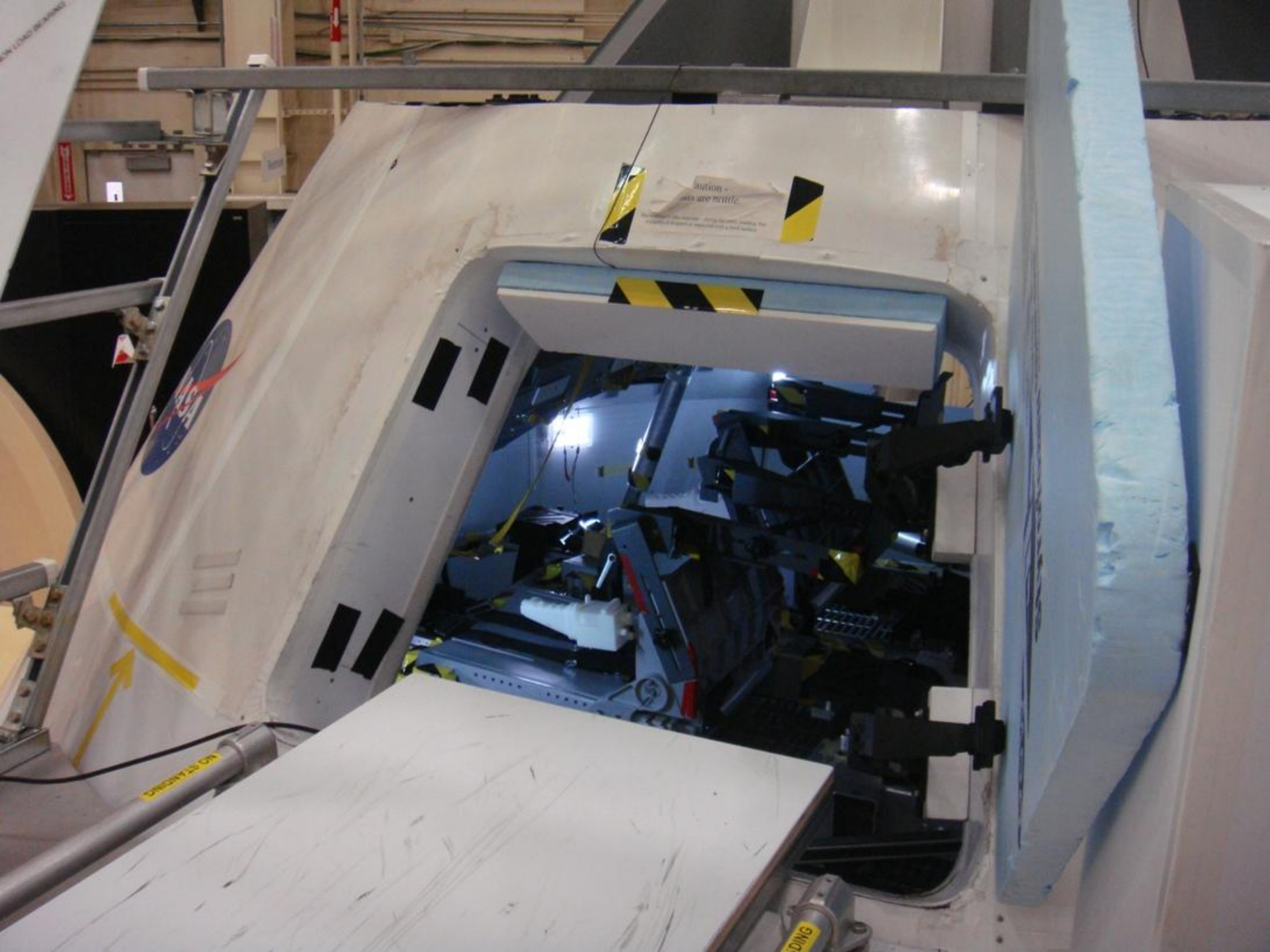
ALAS PLATFORM

Do Not Exceed 500  
lbs on  
ALAS Platform

NO STANDING

MEN





Caution -  
Wires are live!



NO RETAILING

DING







Panel Enable Side 1  
C2 Auto  
C2 CE Auto  
C2 S2 Auto  
C2 Battery Power Up

0 1 2 3  
4 5 6  
7 8 9  
Del Esc

BFCU Engage Enable  
On  
Off  
RHC Left Right  
Strobe On  
Off  
Snorkel Fan High  
Low  
Off

Master Alarm  
WARNING  
CAUTION  
Fire Suppress  
Arm  
Off





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