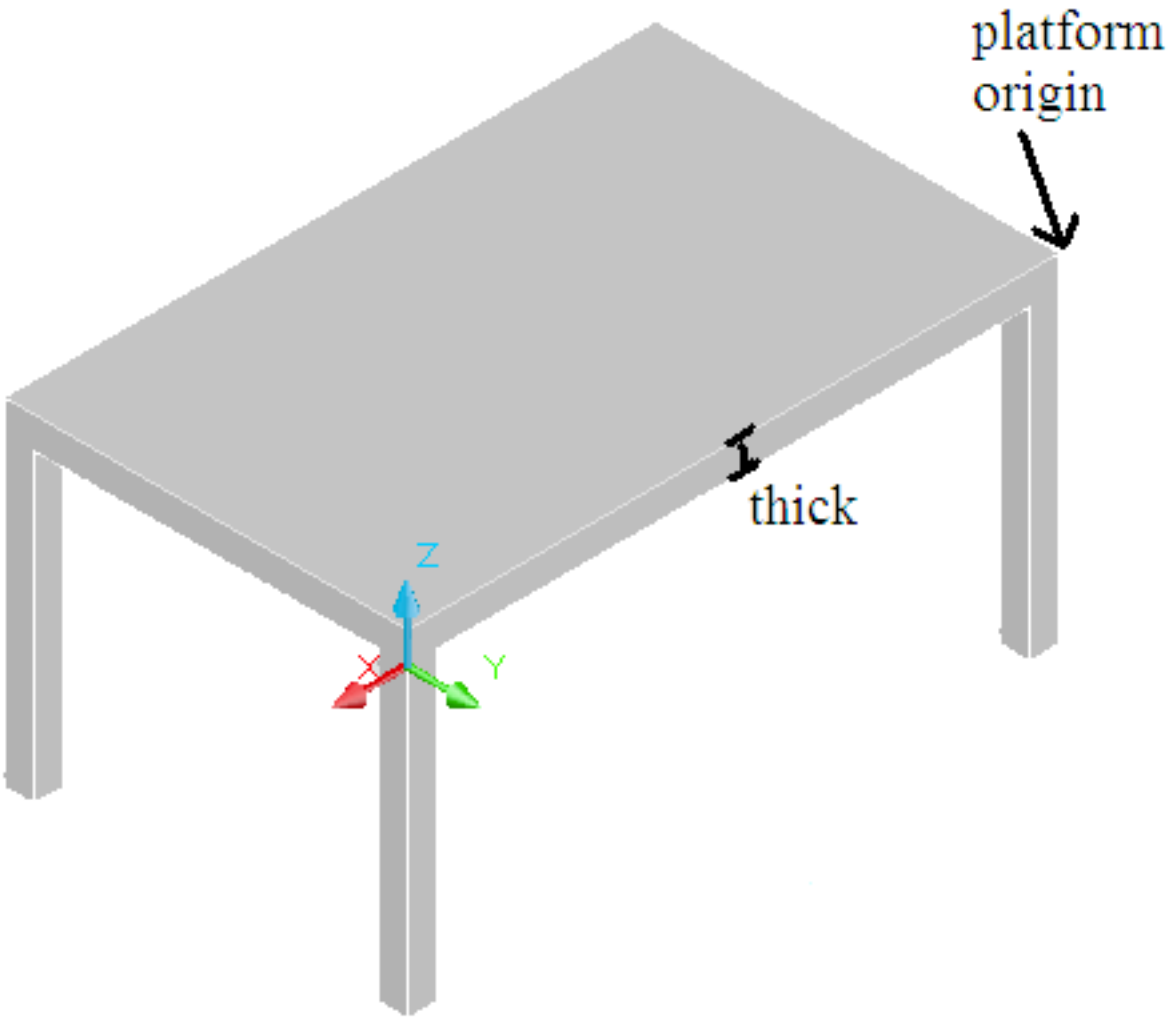
This page last changed on Dec 11, 2008 by ar329.

General Program Information



NE Isometric View

Input Definitions

Inputs Needed to Call the Chemical Stock Tank Function

- origin - a 3*1 matrix with user defined x,y,z positions corresponding to origin. The origin is located at the top right corner of the platform.
- disp - displacement between the edge of the drum containing the chemical stock solution (sometimes also refered to as the chemical stock barrel) and the edge of the platform.
- thick - specifies the thickness of the platform.
- walkway - the width of a walkway space on the platform, so that the plant operater can walk on the platform next to the chemical stock drums/barrels
- $column_{dim}$ - a 3*1 matrix with the x,y,z dimensions of the columns.

- R - chemical stock drum radius/ chemical stock barrel radius

Inputs Defined within the Chemical Stock Tank Function

$platform_{origin}$ =

*x : $origin_0$
*y : $origin_1$
*Z : $origin_2$

$platform_{dim}$ =

*x : 2(2R) + (3*disp)
*y : (2R) + walkway + disp
*Z : thick

$plat_{origin}$ =

*x : $platform_{origin0}$
*y : $platform_{origin1}$
*z : $platform_{origin2}$

$plat_{point}$ =

*x : $platform_{origin0}$ - $platform_{dim0}$
*y : $platform_{origin1}$ - $platform_{dim1}$
*z : $platform_{origin2}$ + $platform_{dim2}$

$coll_{origin}$ =

*x : $platform_{origin0}$ - $platform_{dim0}$
*y : $platform_{origin1}$
*z : $platform_{origin2}$

$coll_{point}$ =

*x : $column1_{origin0}$ + $column_{dim0}$
*y : $column1_{origin1}$ - $column_{dim1}$
*z : $column1_{origin2}$ - $column_{dim2}$

$col2_{origin}$ =

*x : $platform_{origin0}$
*y : $platform_{origin1}$
*z : $platform_{origin2}$

$col2_{point}$ =

*x : $column2_{origin0}$ - $column_{dim0}$
*y : $column2_{origin1}$ - $column_{dim1}$
*z : $column2_{origin2}$ - $column_{dim2}$

$col3_{origin}$ =

*x : $platform_{origin0}$ - $platform_{dim0}$
*y : $platform_{origin1}$ - $platform_{dim1}$
*z : $platform_{origin2}$

$col3_{point}$ =

*x : $column3_{origin0}$ + $column_{dim0}$
*y : $column3_{origin1}$ + $column_{dim1}$

*z : $column3_{origin2}$ - $column_{dim2}$

$col4_{origin}$ =

*x : $platform_{origin0}$
*y : $platform_{origin1}$ - $platform_{dim1}$
*z : $platform_{origin2}$

$col4_{point}$ =

*x : $column4_{origin0}$ - $column_{dim0}$
*y : $column4_{origin1}$ + $column_{dim1}$
*z : $column4_{origin2}$ - $column_{dim2}$

Technical Program Outline

Top View

box1 - creates a box that will serve as the platform surface.

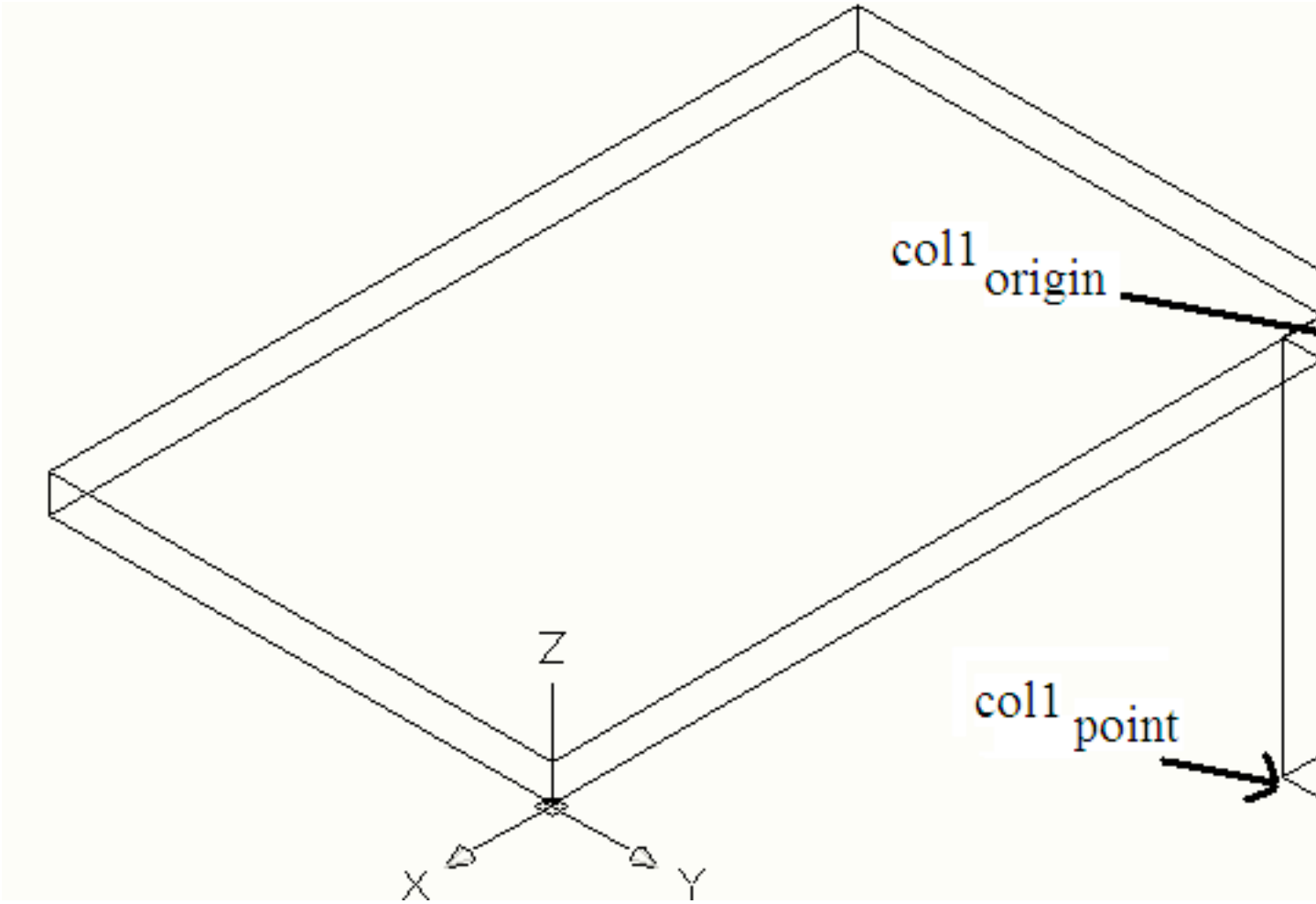
box1 <-- box($plat_{origin}$,$plat_{point}$)

$plat_{origin}$ =

*x : $platform_{origin0}$
*y : $platform_{origin1}$
*z : $platform_{origin2}$

$plat_{point}$ =

*x : $platform_{origin0}$ - $platform_{dim0}$
*y : $platform_{origin1}$ - $platform_{dim1}$
*z : $platform_{origin2}$ + $platform_{dim2}$



NorthEast Isometric View

box2 - creates a box that will serve as the upper left column holding up the platform when the structure is viewed from topview.

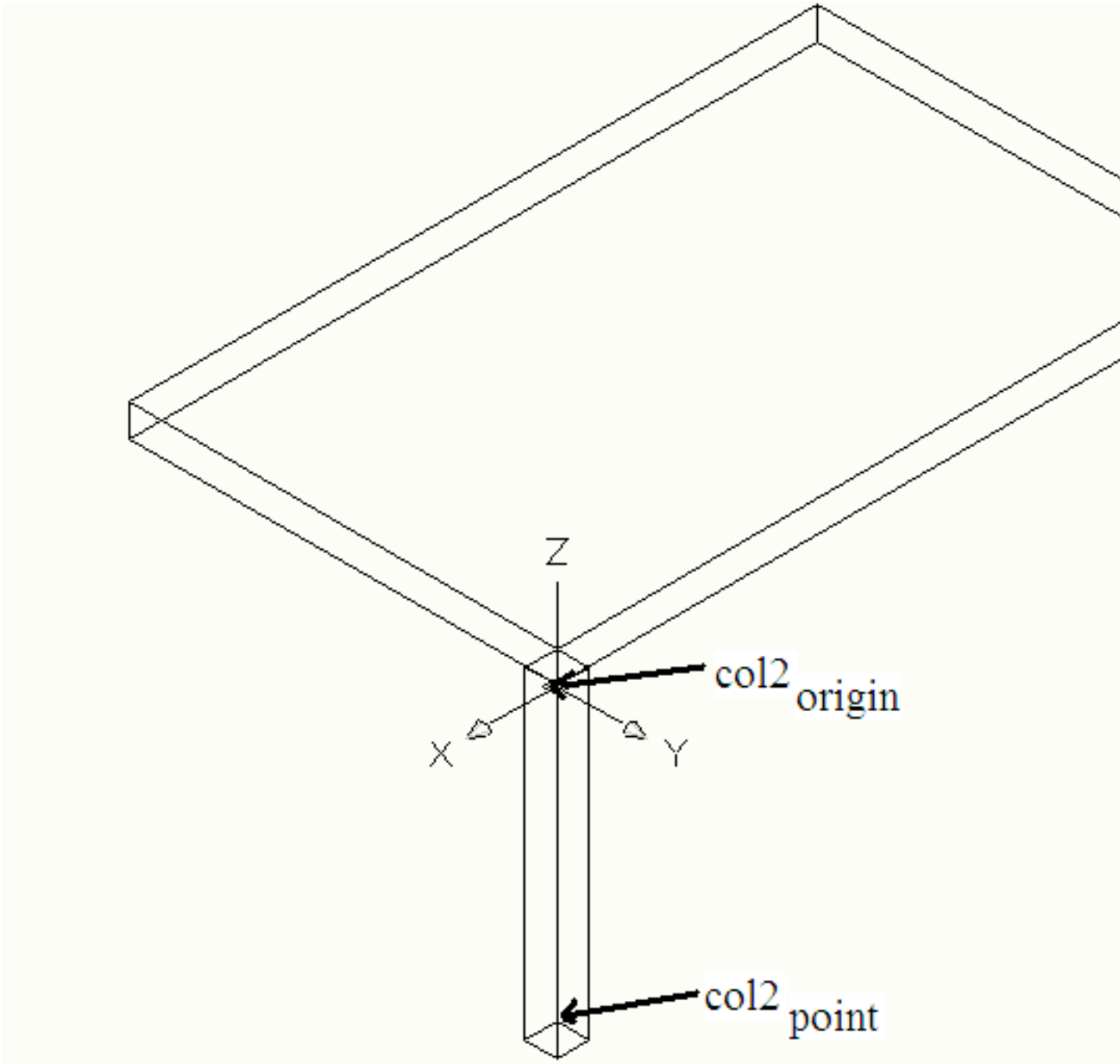
box2 <-- box($col1_{origin}$,$col1_{point}$)

$coll_{origin}$ =

*x : $platform_{origin0}$ - $platform_{dim0}$
*y : $platform_{origin1}$
*z : $platform_{origin2}$

$coll_{point}$ =

*x : $column1_{origin0}$ + $column_{dim0}$
*y : $column1_{origin1}$ - $column_{dim1}$
*z : $column1_{origin2}$ - $column_{dim2}$



NorthEast Isometric View

box3 - creates a box that will serve as the upper right column holding up the platform when the structure is viewed from topview.

box3 <-- box($col2_{origin}$,$col2_{point}$)

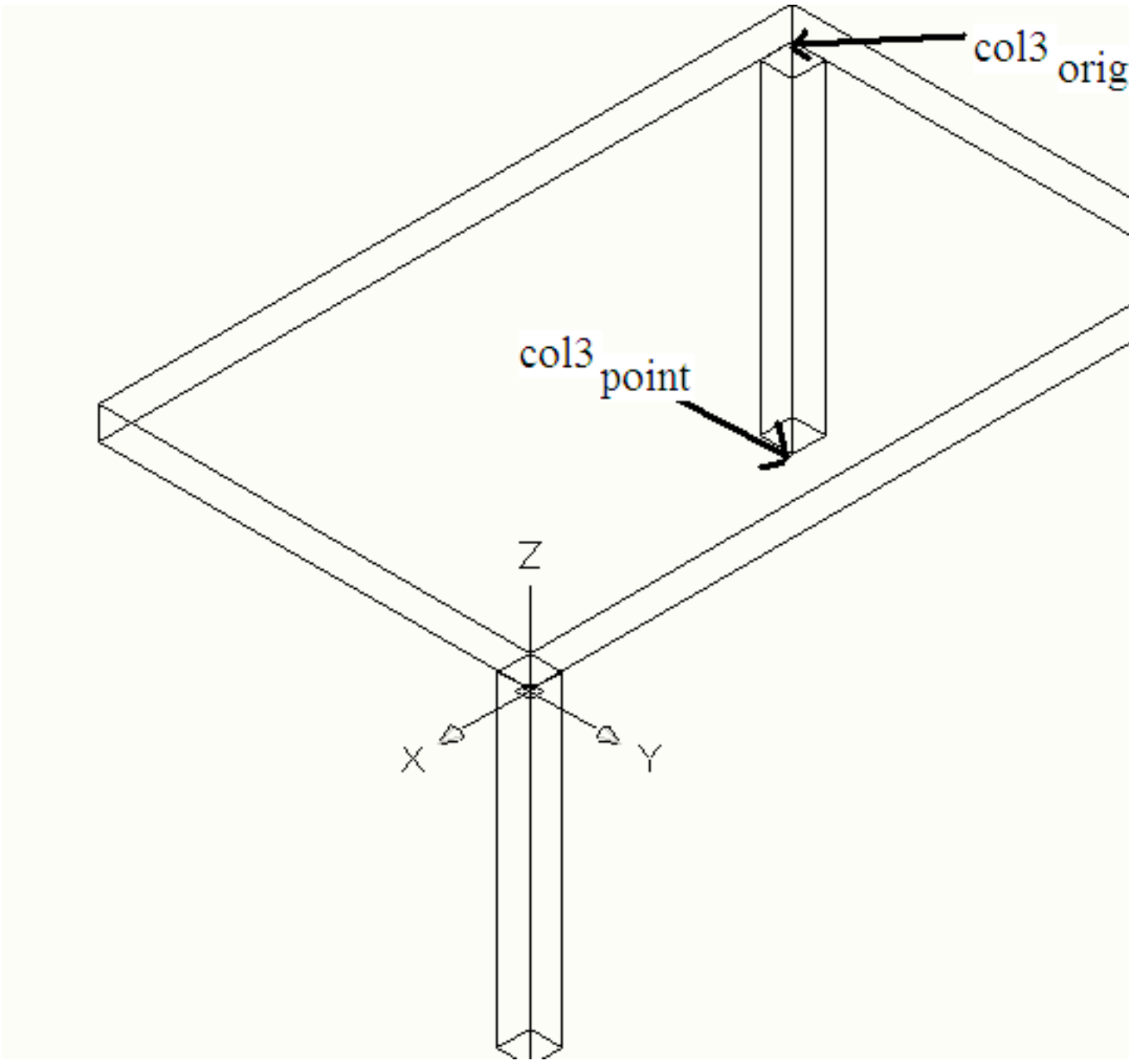
$col2_{origin}$ =

*x : $platform_{origin0}$
*y : $platform_{origin1}$
*z : $platform_{origin2}$

$col2_{point}$ =

*x : $column2_{origin0}$ - $column_{dim0}$
*y : $column2_{origin1}$ - $column_{dim1}$

*z : $column2_{origin2}$ - $column_{dim2}$



NorthEast Isometric View

box4 - creates a box that will serve as the lower left column holding up the platform when the structure is viewed from topview.

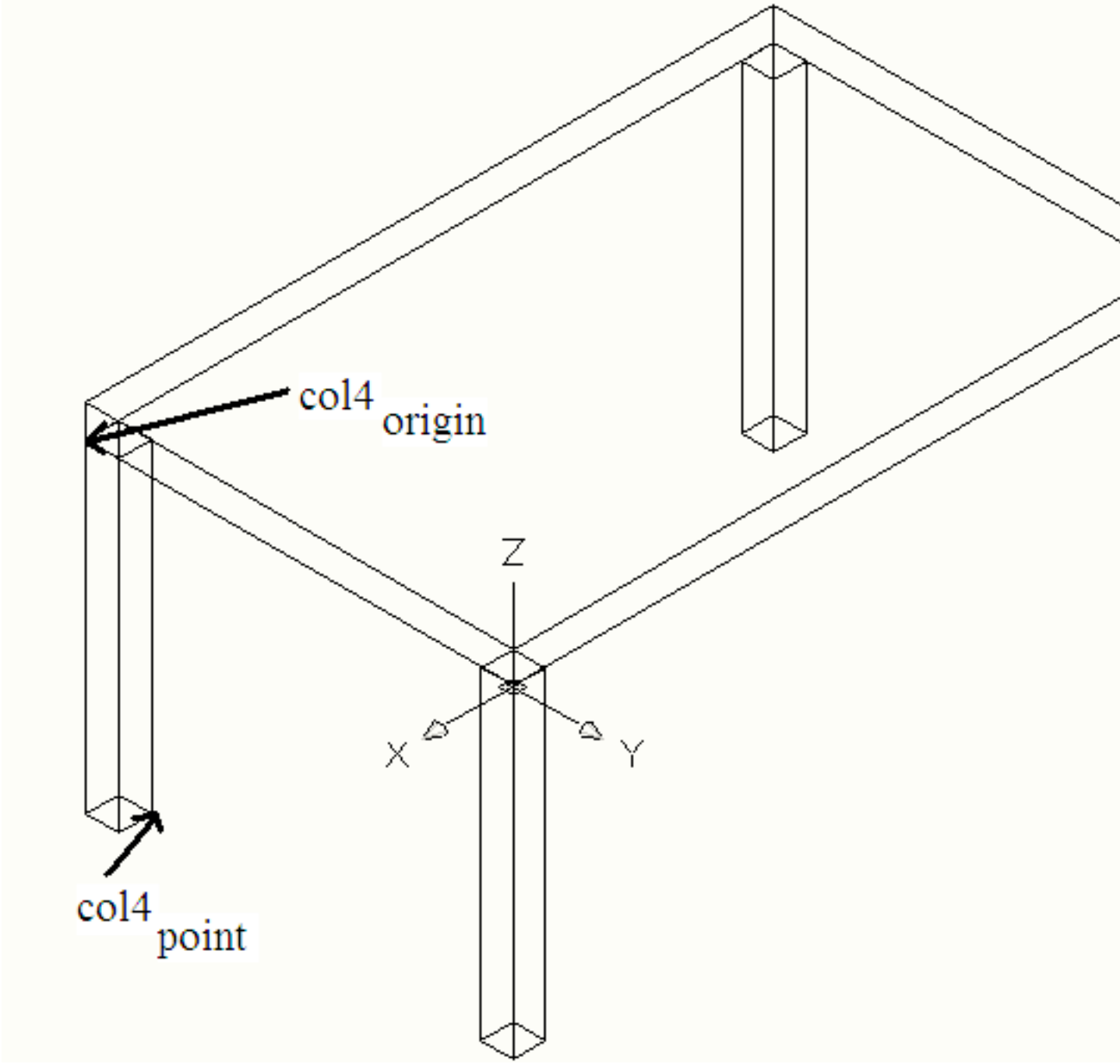
box4 <-- box($col3_{origin}$,$col3_{point}$)

$col3_{origin}$ =

*x : $platform_{origin0}$ - $platform_{dim0}$
*y : $platform_{origin1}$ - $platform_{dim1}$
*z : $platform_{origin2}$

$col3_{point}$ =

*x : $column3_{origin0}$ + $column_{dim0}$
*y : $column3_{origin1}$ + $column_{dim1}$
*z : $column3_{origin2}$ - $column_{dim2}$



NorthEast Isometric View

box5 - creates a box that will serve as the lower left column holding up the platform when the structure is viewed from topview.

box5 <-- box($col4_{origin}$,$col4_{point}$)

$col4_{origin}$ =

*x : $platform_{origin0}$
*y : $platform_{origin1}$ - $platform_{dim1}$
*z : $platform_{origin2}$

$col4_{point}$ =

*x : $column4_{origin0}$ - $column_{dim0}$
*y : $column4_{origin1}$ + $column_{dim1}$
*z : $column4_{origin2}$ - $column_{dim2}$
union1 - $union_{allA}$is used to union the four columns and the top of the platform to create a single solid platform structure upon which the chemical stock tanks can be placed.