

```

In[ ]:= X{1,2,3}
Out[ ]=

$$\{X, X^2, X^3\}$$


In[ ]:= X4,5,6 // FullForm
Out[ ]//FullForm=
Subscript[X, 4, 5, 6]

Superscript[X, 1, 2, 3]

In[ ]:= Overscript[X, 1, 2, 3]
Out[ ]=

$$\overset{1,2,3}{X}$$


In[ ]:= X{1,2,3}{4,5,6}
Out[ ]=

$$\overset{\{1,2,3\}}{X}_{\{4,5,6\}}$$


MakeExpression[SubsuperscriptBox["x", n_], StandardForm] :=

In[ ]:= X1, 2, 34, 5, 6
Out[ ]:= X1,2,3,4,5,6
Out[ ]=

$$X_{1,2,3,4,5,6}$$


In[ ]:= \(a, b, c\)
Out[ ]=
RowBox[{a, , b, , c}]

In[ ]:= a b
Out[ ]=
{{a, b}}

In[ ]:= Xa b c
Out[ ]=
{{Xa, Xb, Xc}}

Cell[BoxData[
UnderoverscriptBox["X", GridBox[{
{"4", "5", "6"}
}], GridBox[{
{"1", "2", "3"}
}]]], "Input",
CellChangeTimes->{{3.970230565311392*^9, 3.970230579682558*^9}},
CellLabel->"In[11] :="]

Out[ ]=

$$\overset{\{1,2,3\}}{X}_{\{4,5,6\}}$$


```

In[]:= `\(a b c\) // FullForm`

Out[]//FullForm=
"abc"

In[]:= `HoldComplete[ a b c ]`

Out[]=
HoldComplete[{ {a, b, c} }]

In[]:= `<< Notation``

In[]:= `Notation[  $\text{BX}_{\text{lc}_- \text{li}_- \text{lj}_-}^{\text{uc}_- \text{ui}_- \text{uj}_-} \Leftrightarrow \text{BX}[\text{uc}_-, \text{ui}_-, \text{uj}_-, \text{lc}_-, \text{li}_-, \text{lj}_-]$  ]`

Notation: The external representation $\left\{ \left\{ \text{BX}_{\{\{\text{lc}_-, \text{li}_-, \text{lj}_-\}\}}^{\text{uc}_- \text{ui}_- \text{uj}_-}, \text{BX}_{\{\{\text{lc}_-, \text{li}_-, \text{lj}_-\}\}}^{\text{ui}_-}, \text{BX}_{\{\{\text{lc}_-, \text{li}_-, \text{lj}_-\}\}}^{\text{uj}_-} \right\} \right\}$ does not have an embedded TemplateBox with tag NotationTemplateTag. The Notation statement
`Notation[  $\left\{ \left\{ \text{BX}_{\{\{\ll 3 \gg\}\}}^{\text{uc}_-}, \text{BX}_{\{\{\ll 3 \gg\}\}}^{\text{ui}_-}, \text{BX}_{\{\{\ll 3 \gg\}\}}^{\text{uj}_-} \right\} \right\} \Leftrightarrow \text{BX}[\text{uc}_-, \text{ui}_-, \text{uj}_-, \text{lc}_-, \text{li}_-, \text{lj}_-]$  ]` may not have been entered using the palette, or the embedded TemplateBox may have been deleted. The embedded TemplateBox ensures correct parsing and retention of proper styling and grouping information.

Out[]=
\$Failed

In[]:= `ToBoxes  $\begin{bmatrix} 1 & 2 & 3 \\ X \\ 4 & 5 & 6 \end{bmatrix}$`

Out[]=
UnderoverscriptBox[X, RowBox[{ {, RowBox[{ {, RowBox[{ {4, , 5, , 6} }] , } }] , } }] ,
RowBox[{ {, RowBox[{ {, RowBox[{ {1, , 2, , 3} }] , } }] , } }]]