

Unifying Lists

?- $[X, Y, Z] = [john, likes, fish]$.

$$\begin{array}{l} X = john \\ Y = likes \\ Z = fish \end{array}$$

?- $[cat] = [X|Y]$.

$$\begin{array}{l} X = cat \\ Y = [] \end{array}$$

?- $[1, 2] = [X|Y]$.

$$\begin{array}{l} X = 1 \\ Y = [2] \end{array}$$

?- $[a, b, c] = [X|Y]$.

$$\begin{array}{l} X = a \\ Y = [b, c] \end{array}$$

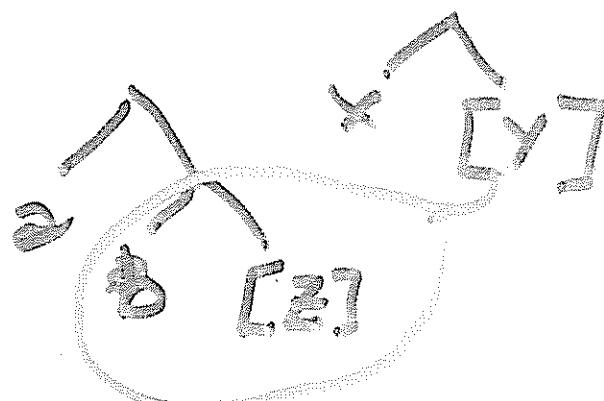
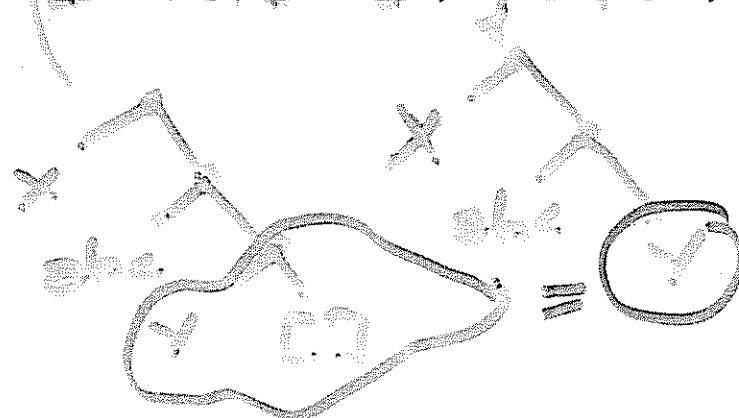
?- $[a, b|Z] = [X|Y]$.

$$\begin{array}{l} X = a \\ Y = [b | Z] \end{array}$$

?- $[X, abc, Y] = [X, abc|Y]$.

$$\begin{array}{l} X = abc \\ Y = [abc | Y] \end{array}$$

?- $[[the|Y]|Z] = [[X, hare]|[is, here]]$.



$$\begin{aligned} Y &= [Y, C] \\ &= [C1, C2, C3] \end{aligned}$$

$$= [C1, C2, C3]$$

$$\begin{aligned} X &= the \\ Y &= [here] \\ Z &= [is, here] \end{aligned}$$