

Cut type PP

$$3 \times 2 \times 5 \Rightarrow 30$$

$$\begin{matrix} \Rightarrow A \\ \left[\begin{array}{cc} 1 & 2 \\ 4 & 5 \\ 7 & 8 \end{array} \right]_{3 \times 2} \end{matrix} \times \begin{matrix} \Rightarrow B \\ \left[\begin{array}{ccccc} 1 & 2 & 3 & 4 & 5 \\ 6 & 7 & 8 & 9 & 10 \end{array} \right]_{2 \times 5} \end{matrix} \times \begin{matrix} \Rightarrow C \\ \left[\begin{array}{cccc} 1 & 6 & 11 & 16 \\ 2 & 7 & 12 & 17 \\ 3 & 8 & 13 & 18 \\ 4 & 9 & 14 & 19 \\ 5 & 10 & 15 & 20 \end{array} \right]_{5 \times 4} \end{matrix}$$

$$\begin{matrix} BC \\ \downarrow \\ 2 \times 5 \times 4 \\ \rightarrow 40 \end{matrix}$$

$$ABC \Rightarrow \left[\begin{array}{cccccc} 13 & 16 & - & - & - & - \\ - & - & - & - & - & - \\ - & - & - & - & - & - \end{array} \right]_{3 \times 5} \times (5 \times 4)$$

$$\begin{matrix} (3 \times 2) & (2 \times 4) \\ \uparrow & \downarrow \\ BC & \\ \downarrow & \\ 3 \times 2 \times 4 & \\ 24 & \end{matrix}$$

$$\begin{matrix} \text{① } (AB) \times C \Rightarrow 90 \\ \text{② } A(B \times C) \Rightarrow 64 \end{matrix}$$

$$\begin{matrix} A & B & C \\ \swarrow & \downarrow & \downarrow \\ 3 \times 2 & 2 \times 5 & 5 \times 4 \\ \downarrow & \downarrow & \downarrow \\ 3 & 2 & 5 & 4 \\ \downarrow & \downarrow & \downarrow \\ 3 \times 2 & 5 \times 4 & \\ \Rightarrow 64 \end{matrix}$$

$$\begin{matrix} & 2 \times 5 & & 1 \times 3 \\ & \uparrow & & \uparrow \\ (4 & 2 & 3 & 1 & 3) \\ \downarrow & & \downarrow & & \\ 4 \times 2 & & 3 \times 1 & & \end{matrix}$$

$$A \times B \times C \times D$$

$$(AB) \times C \times D \Rightarrow (4 \times 2 \times 3) + (4 \times 3 \times 1) + (4 \times 1 \times 3) \Rightarrow 48$$

$$\begin{matrix} 4 \times 3 & 3 \times 1 \\ \downarrow & \downarrow \\ 4 \times 1 & 1 \times 3 \end{matrix}$$

$$\begin{matrix} A \Rightarrow \{4, 2, 3\} \\ B \Rightarrow \{2, 3\} \\ C \Rightarrow \{3, 1\} \\ D \Rightarrow \{1, 3\} \end{matrix}$$

$$\begin{matrix} (2 \times 3 \times 1) & (4 \times 2 \times 1) & (4 \times 1 \times 3) \\ 6 & 8 & 12 \end{matrix} \Rightarrow 26$$

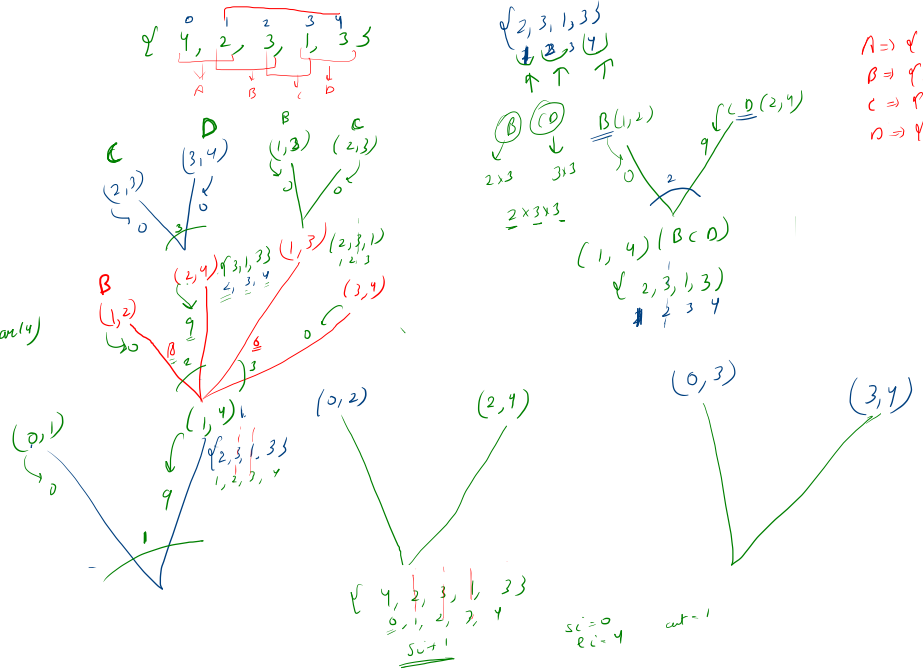
$$(A \times (BC)) \times D$$

$$\begin{matrix} (A \times B) \times (C \times D) \\ \downarrow & \downarrow \\ 4 \times 3 & 3 \times 3 \end{matrix}$$

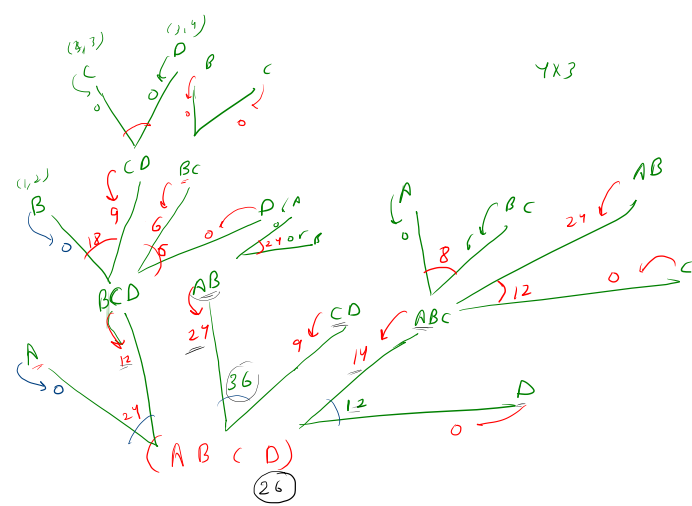
$$\begin{matrix} (4 \times 2 \times 3) & (3 \times 1 \times 3) & (4 \times 3 \times 3) \\ 24 & 9 & 36 \\ \Rightarrow 69 \end{matrix}$$

$y(i+1=j)$
 return 0;

$ans(1) \times ans(2) \times ans(4)$

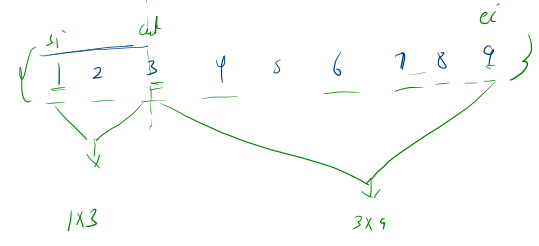


$A \Rightarrow \{1, 2, 3\}$
 $B \Rightarrow \{2, 3\}$
 $C \Rightarrow \{3, 1, 3\}$
 $D \Rightarrow \{1, 3\}$



0 1 2 3
 $\{1, 2, 3, 4\}$

$A \Rightarrow \{1, 2, 3\}$
 $B \Rightarrow \{2, 3\}$
 $C \Rightarrow \{3, 4\}$



$op = ans(si) \times ans(ut) \times ans(ei)$

$rec(si, ut) + rec(ut, ei) + op$