# $YA_0X = XB_0Y$ No constraints No conditions PairComp $A_0 B_0$ $YA_0X = XB_0Y$ $YA_1X = XA_1Y$ $YA_1X = XB_0Y$ $YA_0X = XA_1Y$ $X \neq B_0 X_S$ No constraints $X \neq X_P A_0$ $X \neq B_0 X_S$ $X \neq X_P A_0$ No conditions $A_1 := A_0 B_0$ $A_1 := A_0 B_0$ No conditions ${\tt Pick}\; 1$ $YA_0X = XB_0Y$ $X \neq B_0 X_S$ $X \neq X_P A_0$ No conditions BlockComp $A_0$

## $A_2 = A_3 B_0 A_4$

No constraints

$$A_2 := A_0^{i_1 + i_2 + 1}$$

$$A_3 := A_0^{i_1}$$

$$A_4 := A_0^{i_2}$$

$$\Delta_{\alpha} := \Delta^{i_1}$$

$$A_3 := A_0$$

$$A_4 := A_2^{i_2}$$

## $A_2XA_3 = A_4XA_3B_0A_5$

$$X \neq$$

$$X \neq \varepsilon$$

$$A_2 := A_0^{i_1 + i_3 + 1}$$

$$A_3 := A_0^{i_2}$$

$$A_4 := A_0^{i_1}$$

$$A_5 := A_0^{i_3}$$

$$A_3 := A_0^{i_2}$$

$$A_4 := A_0^{i_1}$$

$$A_{\mathsf{r}} := A_0$$
 $A_{\mathsf{r}} := A^{i_3}$ 

$$Y \neq \varepsilon$$

$$A_2 := A_0^{i_2}$$

$$A_3 := A_0^{i_1+i_3+1}$$

$$A_4 := A_0^{i_1}$$

$$A_5 := A_0^{i_3}$$

 $A_2YA_3 = A_4B_0A_2YA_5$ 

$$A_3 := A_0^{\iota_1 + \iota_3}$$

$$A_4 := A_0^{i_1}$$

$$A_5 := A_0^{i_3}$$

### $A_2YA_3XA_4 = A_5XA_4B_0A_2YA_6$

$$Y \neq \varepsilon$$

$$X \neq \varepsilon$$

$$A_2 := A_0^{i_3}$$

$$A_2 := A_2^{i_1+i_4+}$$

$$A_4 := A_0^{i_2}$$

$$A_5 := A_5^i$$

$$A_2 := A_0^{i3}$$

$$A_3 := A_0^{i_1 + i_4 + 1}$$

$$A_4 := A_0^{i_2}$$

$$A_5 := A_0^{i_1}$$

$$A_6 := A_0^{i_4}$$

 ${\tt Pick}\; 2$ 

## $A_2XA_3 = A_4XA_3B_0A_5$

$$X \neq \varepsilon$$

$$A_{2} := A_{0}^{i_{1}+i_{3}+1}$$

$$A_{3} := A_{0}^{i_{2}}$$

$$A_{4} := A_{0}^{i_{1}}$$

$$A_{5} := A_{0}^{i_{3}}$$

$$A_2 := A_2^{i_2}$$

$$-13 - 10$$

$$A_{r} \cdot - A^{i_3}$$