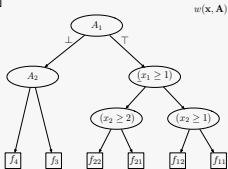
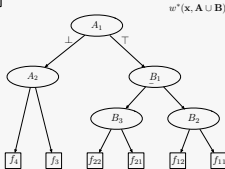


a

$$\varphi \stackrel{\text{def}}{=} \top, \chi \stackrel{\text{def}}{=} [x_1 \in [0, 2]] \wedge [x_2 \in [0, 3]]$$

b**c**

$$\varphi^*(\mathbf{x}, \mathbf{A} \cup \mathbf{B}) \stackrel{\text{def}}{=} \varphi \wedge \chi \wedge B_1 \leftrightarrow (x_1 \geq 1) \wedge \\ B_2 \leftrightarrow (x_2 \geq 1) \wedge B_3 \leftrightarrow (x_2 \geq 2)$$

d**e**

Assignment	Range	w
$\{A_1, A_2, B_1, B_2, B_3\}$	$[x_1 \in [1, 2]], [x_2 \in [2, 3]]$	f_{11}
$\{A_1, A_2, B_1, B_2, \neg B_3\}$	$[x_1 \in [1, 2]], [x_2 \in [1, 2]]$	f_{11}
$\{A_1, A_2, B_1, \neg B_2, \neg B_3\}$	$[x_1 \in [1, 2]], [x_2 \in [0, 1]]$	f_{12}
$\{A_1, A_2, \neg B_1, B_2, B_3\}$	$[x_1 \in [0, 1]], [x_2 \in [2, 3]]$	f_{21}
$\{A_1, A_2, \neg B_1, B_2, \neg B_3\}$	$[x_1 \in [0, 1]], [x_2 \in [1, 2]]$	f_{22}
$\{A_1, A_2, \neg B_1, \neg B_2, \neg B_3\}$	$[x_1 \in [0, 1]], [x_2 \in [0, 1]]$	f_{22}
$\{A_1, \neg A_2, B_1, B_2, B_3\}$	$[x_1 \in [1, 2]], [x_2 \in [2, 3]]$	f_{11}
\vdots [same as with $\{A_1, A_2\}$]		\vdots
$\{A_1, \neg A_2, \neg B_1, \neg B_2, \neg B_3\}$	$[x_1 \in [0, 1]], [x_2 \in [0, 1]]$	f_{22}
$\{\neg A_1, A_2, B_1, B_2, B_3\}$	$[x_1 \in [1, 2]], [x_2 \in [2, 3]]$	f_3
$\{\neg A_1, A_2, B_1, B_2, \neg B_3\}$	$[x_1 \in [1, 2]], [x_2 \in [1, 2]]$	f_3
$\{\neg A_1, A_2, B_1, \neg B_2, \neg B_3\}$	$[x_1 \in [1, 2]], [x_2 \in [0, 1]]$	f_3
$\{\neg A_1, A_2, \neg B_1, B_2, B_3\}$	$[x_1 \in [0, 1]], [x_2 \in [2, 3]]$	f_3
$\{\neg A_1, A_2, \neg B_1, B_2, \neg B_3\}$	$[x_1 \in [0, 1]], [x_2 \in [1, 2]]$	f_3
$\{\neg A_1, A_2, \neg B_1, \neg B_2, \neg B_3\}$	$[x_1 \in [0, 1]], [x_2 \in [0, 1]]$	f_3
$\{\neg A_1, \neg A_2, B_1, B_2, B_3\}$	$[x_1 \in [1, 2]], [x_2 \in [2, 3]]$	f_4
\vdots [same as with $\{\neg A_1, A_2\}$]		\vdots
$\{\neg A_1, \neg A_2, \neg B_1, \neg B_2, \neg B_3\}$	$[x_1 \in [0, 1]], [x_2 \in [0, 1]]$	f_4