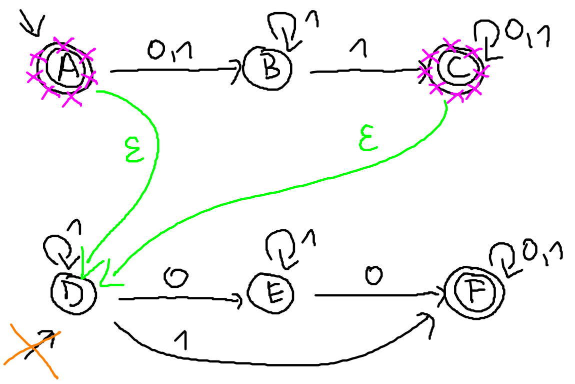
L_1:

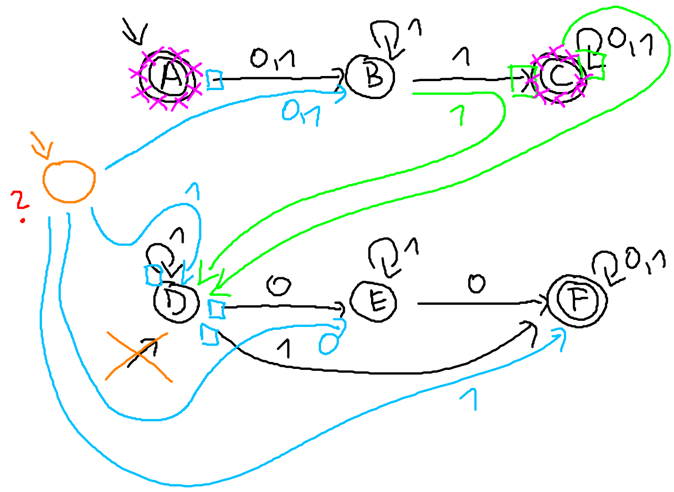
		0	1
$\leftrightarrow$	A	{B}	{B}
	B		{B,C}
$\leftarrow$	C	{C}	{C}

$\overline{L_1}$:

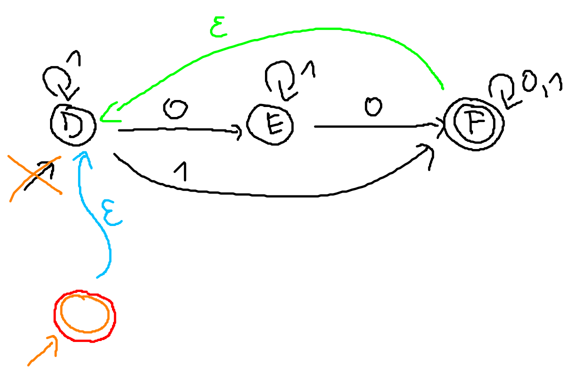
		0	1
$\cancel{\leftrightarrow}$	{A}	{B}	{B}
$\leftarrow$	{B}	{}	{B,C}
$\cancel{\leftarrow}$	{B,C}	{C}	{B,C}
$\cancel{\leftarrow}$	{C}	{C}	{C}
$\leftarrow$	{}	{}	{}

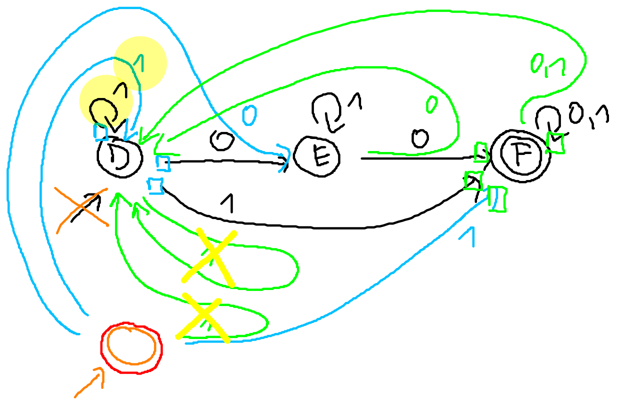
$\boxed{L_1 \cdot L_2}$





$\boxed{L_2^*}$





VÝRAZ HODNOTA

	VÝRAZ	HODNOTA
$a \in \Sigma$	a	$h(a) = \{a\}$
	ε	$h(\varepsilon) = \{\varepsilon\}$
	ϕ	$h(\phi) = \{\}$
r_1, r_2	$(r_1 + r_2)$	$h(r_1 + r_2) = h(r_1) \cup h(r_2)$
	$(r_1 \cdot r_2)$	$h(r_1 \cdot r_2) = h(r_1) \cdot h(r_2)$
r	r^*	$h(r^*) = (h(r))^*$

~~r^+~~

~~$r^{\{3,5\}}$~~

(1.1) $(0+1)^* . 0110 . (0+1)^*$

(1.2) $((0+1)(0+1)(0+1))^* . (0+1)$

$(0+1) . ((0+1)(0+1)(0+1))^*$

$(000 + 001 + 010 + 011 + 100 + 101 + 110 + 111)^* (0+1)$

$((0+1)(00 + 01 + 1(0+1)))^* (0+1) . \varepsilon + \phi$

(1.3) $0^* 1 0^* 1 0^* 1 \cancel{0^*} . (0+1)^*$

$0^* 1 (0+1)^* 1 0^* 1 0^*$

(1.6) $a(a+b)^* a + b(a+b)^* b + \cancel{\varepsilon} + a + b$

(1.7) $ab\boxed{(bb)^*} + \varepsilon \boxed{(bb)^*} = (ab + \varepsilon)\boxed{(bb)^*}$

(1.8) $(aaa)^* (a + aabb + b)(bbb)^*$

(1) $\boxed{0^*}(\boxed{0^*}+\boxed{1^*}) = \underbrace{\boxed{0^*}.\boxed{0^*}} + \boxed{0^*}\boxed{1^*}$

$= 0^* + 0^*1^* = \boxed{0^*}.\varepsilon + \boxed{0^*}.1^* = \boxed{0^*}.(\underbrace{\varepsilon + 1^*})$

$= 0^*(1^*) = 0^*1^*$

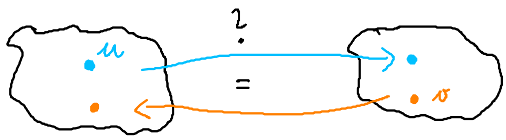
(2) $11^* + \boxed{0^*0+\varepsilon} = 11^* + 0^* = \boxed{11^*+\varepsilon} + 0^* = 1^* + 0^*$

$A^*(A+B)^* = (A+B)^*$ $\qquad$ $(A+\varepsilon)(A+B)^* = (A+B)^*$

(3) $0^*(1+\varepsilon)\boxed{0^*(0+1)^*} = 0^*(1+\varepsilon)\boxed{(0+1)^*} = 0^*\boxed{(1+\varepsilon)(0+1)^*} = \boxed{0^*(0+1)^*} = (0+1)^*$

$0^*.(0+1)^* \overset{?}{=} (0+1)^*$

$h(\boxed{0^*}.\boxed{(0+1)^*}) = h((0+1)^*)$



$\Rightarrow$

$\varepsilon . \varepsilon = \varepsilon$ $\checkmark$

$\varepsilon . (0+1)(0+1)^* = (0+1)(0+1)^*$ $\checkmark$

$00^* . \varepsilon = 00^*$ $\checkmark$

$00^* . (0+1)(0+1)^* = 00^*(0+1)(0+1)^*$ $\checkmark$

$\Big\}$ $\checkmark$ $\Big\}$ $\Leftrightarrow$

$\Leftarrow$

3.1 $X = 01\boxed{X} + 1$ $\to X \to 01X \mid 1$

$X = (01)^* . 1$

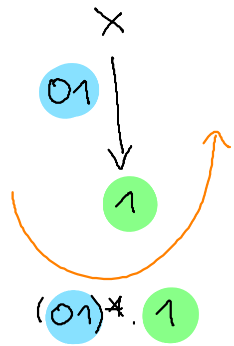
$X \stackrel{?}{=} 01X + 1$

$(01)^*1 \stackrel{?}{=} 01[(01)^*1] + 1$

$= (01)(01)^*\boxed{1} + \boxed{1}$

$= (01)^* . \boxed{1}$

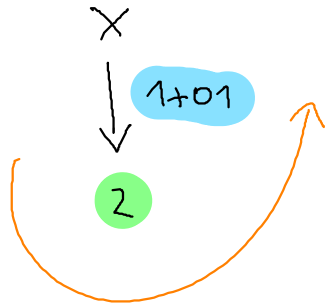
L = P ✓



3.2 $X = \boxed{X}1 + \boxed{X}01 + 2$

$= \boxed{X}(1+01) + 2$

$X = 2 . (1+01)^*$



3.3 $X = (0^*1+1)(X+1)$

$= \underbrace{(0^*1+1)} X + (0^*1+1).1$

$= (0^*1) X + 0^*11$ $\Rightarrow X = (0^*1)^* . 0^*11$

3.4 $X = X + X(1 + 0^*1 + \varepsilon)$

$= X[\varepsilon + \underbrace{1 + 0^*1} + \varepsilon]$

$= \boxed{X}[\varepsilon + 0^*1] + \cancel{\boxed{\varepsilon}} + \boxed{\phi}$ ✓

$X = \boxed{\phi} . (\varepsilon + 0^*1)^* = \phi$