

Prática 03 - Portões

01- a) $S = A'B'C'D' + A'B'C'D + A'BCD' + A'BCD + AB'C'D$

C/D \ A/B	00	01	11	10
00	1			
01	1			1
11		1		
10		1		

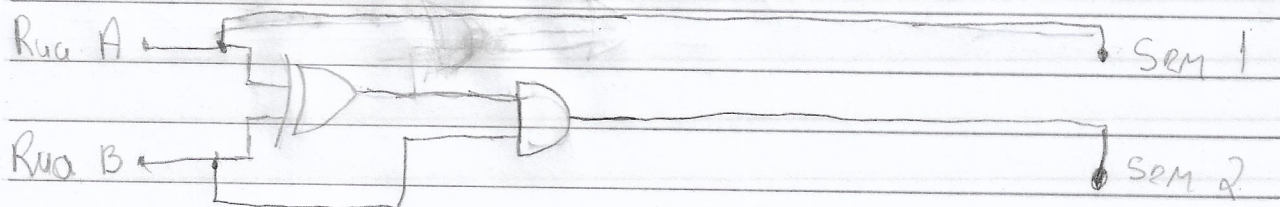
$= A'B'C' + B'C'D + A'BC$

b) $S = AB'CD + AB'CD' + ABC'D + ABCD + A'B'CD + A'B'CD' + AB'C'D' + A'B'C'D$

C/D \ A/B	00	01	11	10
00	0	0	0	1
01	1	0	1	0
11	1	0	1	1
10	1	0	0	1

$= B'C + A'B'D + ABD + A'BC'D'$

3- 0 = sem carros, 1 = com carros.



2- $(BC + \overline{B}\overline{A} + \overline{A}\overline{D}) + (\overline{C} + A + D)$
 $[(B\overline{D})(\overline{B}\overline{A}) + (B\overline{D})(\overline{B}\overline{A}) + \overline{A}\overline{D}] + C\overline{A}\overline{D}$

$BB + B\overline{A} + \overline{D}B + \overline{D}\overline{A} + \dots$

$B + B\overline{A} + \overline{D}B + \overline{D}\overline{A} + \dots$

$$B + B\bar{A} + \bar{D}B + D + A + (\bar{B} + D)(\bar{B} + A) + (A + D) + C\bar{A}\bar{D}$$

$$B + B\bar{A} + D + B + A$$

$$B + B\bar{A} + A + D$$

$$B + B + A + D$$

$$(B + A + D) + (A + D) + C\bar{A}\bar{D}$$

$$B + A + D(C\bar{A}\bar{D} + B\bar{A}D(A + D)) =$$

$$\bar{B}\bar{A} + \bar{D}\bar{A} + B\bar{D} + A\bar{D} + B\bar{A}D(A + D)$$

$$\bar{B}\bar{A} + \bar{D}\bar{A} + B\bar{D} + A\bar{D} + B\bar{A} + B\bar{D} + A + A\bar{D} + D$$

$$\bar{B}\bar{A} + B\bar{D} + \bar{D}\bar{A} + A\bar{D} + \bar{D}\bar{D} + A\bar{A} + A\bar{D}$$

$$\bar{B}\bar{A} + B\bar{D} + \bar{D}\bar{A} + A\bar{D} + A + A\bar{D}$$

$$\bar{B}\bar{A} + B\bar{D} + A + B\bar{A} + \bar{D}\bar{D} + A\bar{A} + A\bar{D}$$

$$\bar{B}\bar{A} + B\bar{D} + A\bar{D}$$