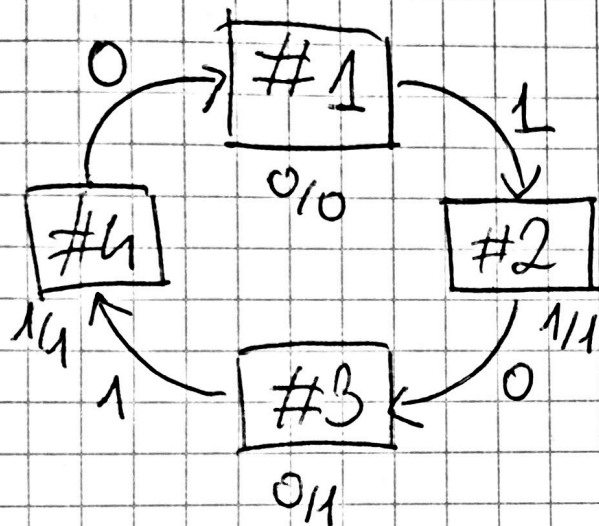


Zadanie 1

x/y



| x \ y | 0 | 1 | Y |
|-------|---|---|---|
| 1 | 1 | 2 | 0 |
| 2 | 3 | 2 | 1 |
| 3 | 3 | 4 | 1 |
| 4 | 1 | 4 | 0 |

| | Q ₁ Q ₂ | |
|---------------------------------------|-------------------------------|----|
| q₁q₂ | 0 | 1 |
| 00 | 00 | 01 |
| 01 | 11 | 01 |
| 11 | 11 | 10 |
| 10 | 00 | 10 |

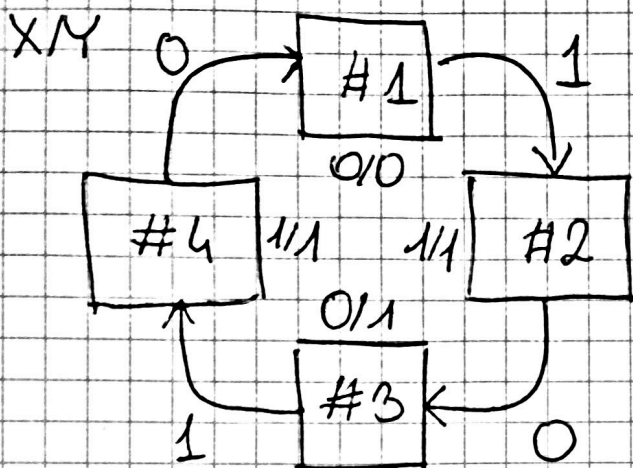
| q ₁ q ₂ | Y |
|-------------------------------|---|
| 00 | 0 |
| 01 | 1 |
| 11 | 1 |
| 10 | 0 |

$$Q_1 = xq_1 + q_1q_2 + \bar{x}q_2$$

$$Q_2 = \bar{x}q_2 + x\bar{q}_1 + \bar{q}_1q_2$$

$$Y = q_2$$

Zadanie 2



| P_1, P_2 | X | Y |
|------------|-----|-----|
| 0 0 | 0 | 0 |
| 0 1 | 1 | 1 |
| 1 1 | 1 | 1 |
| 1 0 | 0 | 0 |

| P_1, P_2 | X | Y |
|------------|-----|-----|
| 0 0 | 0 | 0 |
| 0 1 | 1 | 1 |
| 1 1 | 1 | 1 |
| 1 0 | 0 | 0 |

| P_1, P_2 | X | Y |
|------------|-----|-----|
| 0 0 | 0 | 0 |
| 0 1 | 1 | 1 |
| 1 1 | 1 | 1 |
| 1 0 | 0 | 0 |

$$Y = P_1 + P_2$$

$$P_1 = \bar{X}P_2 + XP_1$$

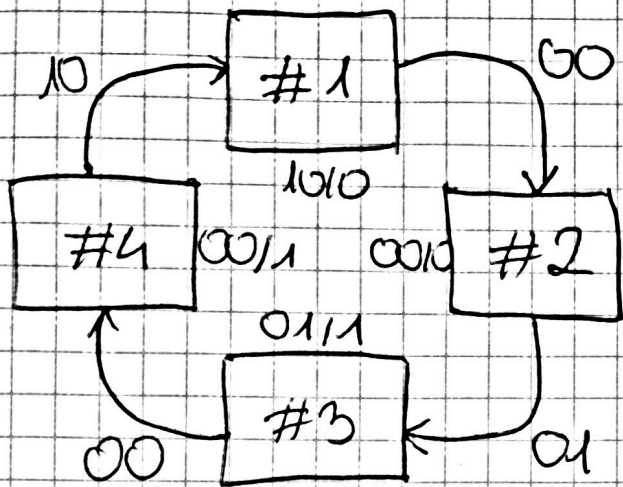
$$P_2 = \bar{X}P_2 + \bar{X}P_1$$

Test

| T | X | Y |
|---|---|---|
| 0 | 0 | 0 |
| 1 | 1 | 1 |
| 2 | 0 | 1 |
| 3 | 1 | 1 |
| 4 | 0 | 0 |

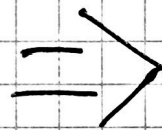
Zadanie 3

H1 H2 / Y



H1 H2

| | 00 | 01 | 11 | 10 | |
|----|----|----|----|----|---|
| 00 | 2 | | | 1 | 0 |
| 01 | 2 | 3 | | | 0 |
| 11 | 4 | 3 | | | 1 |
| 10 | 4 | | | 1 | 1 |



| | | | |
|---|---|---|---|
| 2 | 3 | 1 | 0 |
| 4 | 3 | 1 | 1 |

H1 H2

| | | |
|---|---|---|
| 0 | 1 | 0 |
| 1 | 1 | 0 |

TEST

| T | X | Y |
|---|---|---|
| 0 | 0 | 0 |
| 1 | 1 | 1 |
| 2 | 0 | 1 |
| 3 | 1 | 1 |
| 4 | 0 | 0 |

$$Q = a + \bar{b} \cdot q$$

$$Y = H_2 + Y \cdot \bar{H}_1$$

$$S = H_2$$

$$R = H_1$$