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| 00 | 01 | 10 | 11 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 |
| 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 |
| 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 |
| 0 | 1 | 0 | 1 | 1 | 0 | 1 | 0 |
| 0 | 1 | 1 | 0 | 0 | 1 | 1 | 0 |
| 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 |
| 1 | 0 | 1 | 0 | 0 | 1 | 0 | 1 |
| 1 | 0 | 1 | 1 | 1 | 1 | 0 | 1 |
| 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 |
| 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 |
| 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |

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| 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 1 | 1 |
| 0 | 0 | 1 | 0 | 1 |
| 0 | 0 | 1 | 1 | 0 |
| 0 | 1 | 0 | 0 | 1 |
| 0 | 1 | 0 | 1 | 0 |
| 0 | 1 | 1 | 0 | 0 |
| 0 | 1 | 1 | 1 | 1 |
| 1 | 0 | 0 | 0 | 1 |
| 1 | 0 | 0 | 1 | 0 |
| 1 | 0 | 1 | 0 | 0 |
| 1 | 0 | 1 | 1 | 1 |
| 1 | 1 | 0 | 0 | 0 |
| 1 | 1 | 0 | 1 | 1 |
| 1 | 1 | 1 | 0 | 1 |
| 1 | 1 | 1 | 1 | 0 |

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

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|  |  |  |  |  |
| 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 1 | 1 |
| 0 | 0 | 1 | 0 | 1 |
| 0 | 0 | 1 | 1 | 0 |
| 0 | 1 | 0 | 0 | 1 |
| 0 | 1 | 0 | 1 | 0 |
| 0 | 1 | 1 | 0 | 0 |
| 0 | 1 | 1 | 1 | 1 |
| 1 | 0 | 0 | 0 | 1 |
| 1 | 0 | 0 | 1 | 0 |
| 1 | 0 | 1 | 0 | 0 |
| 1 | 0 | 1 | 1 | 1 |
| 1 | 1 | 0 | 0 | 0 |
| 1 | 1 | 0 | 1 | 1 |
| 1 | 1 | 1 | 0 | 1 |
| 1 | 1 | 1 | 1 | 0 |

D3=0, D2=1, D1=0, D0 = 1 =>P =0

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|  |  |  |  |  |  |
| 0 | 0 | 0 | 0 | 1 | 0 |
| 0 | 0 | 0 | 1 | 0 | 0 |
| 0 | 0 | 1 | 0 | 0 | 0 |
| 0 | 0 | 1 | 1 | 0 | 0 |
| 0 | 1 | 0 | 0 | 0 | 1 |
| 0 | 1 | 0 | 1 | 1 | 0 |
| 0 | 1 | 1 | 0 | 0 | 0 |
| 0 | 1 | 1 | 1 | 0 | 0 |
| 1 | 0 | 0 | 0 | 0 | 1 |
| 1 | 0 | 0 | 1 | 0 | 1 |
| 1 | 0 | 1 | 0 | 1 | 0 |
| 1 | 0 | 1 | 1 | 0 | 0 |
| 1 | 1 | 0 | 0 | 0 | 1 |
| 1 | 1 | 0 | 1 | 0 | 1 |
| 1 | 1 | 1 | 0 | 0 | 1 |
| 1 | 1 | 1 | 1 | 1 | 0 |

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| A |  |  |  |  |
|  | 1 | 0 | 0 | 0 |
|  | 0 | 1 | 0 | 0 |
|  | 0 | 0 | 1 | 0 |
|  | 0 | 0 | 0 | 1 |

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

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| IN | ESTADO ATUAL | | | ESTADO FUTURO | | | ENTRADA DO FLIP-FLOP JK | | |
|  |  |  |  |  |  |  |  |  |  |
| 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 |
| 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 1 |
| 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 1 |
| 0 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 |
| 0 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 |
| 0 | 1 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 1 |
| 0 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 1 |
| 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| 1 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 1 |
| 1 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 |
| 1 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 |
| 1 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 1 |
| 1 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 1 |
| 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 1 |
| 1 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 |

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| ESTADO ATUAL | | IN | ESTADO FUTURO | | SAÍDAS | | | FF 1 | | FF 0 | |
|  |  |  |  |  |  |  |  |  |  |  |  |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | X | 0 | X |
| 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | X | 1 | X |
| 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | X | X | 1 |
| 0 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 1 | X | X | 1 |
| 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | X | 1 | 0 | X |
| 1 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | X | 0 | 1 | X |
| 1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | X | 1 | X | 1 |
| 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | X | 1 | X | 1 |

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| ESTADOS | SAÍDAS | CÓDIGOS |
| A | 000 | 00 |
| B | 100 | 01 |
| C | 110 | 10 |
| D | 111 | 11 |

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| ESTADOS | SAÍDAS | CÓDIGOS |
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|  | 1 | 010 |
|  | 1 | 011 |
|  | 0 | 100 |

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| ESTADO ATUAL | | IN | ESTADO FUTURO | | OUT |
|  |  |  |  |  |  |
| 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 1 | 0 | 1 | 0 |
| 0 | 1 | 0 | 1 | 0 | 1 |
| 0 | 1 | 1 | 1 | 0 | 1 |
| 1 | 0 | 0 | 1 | 1 | 1 |
| 1 | 0 | 1 | 1 | 1 | 1 |
| 1 | 1 | 0 | 0 | 0 | 0 |
| 1 | 1 | 1 | 1 | 1 | 0 |

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|  | ESTADO ATUAL | | | $ | ESTADO FUTURO | | | SAÍDAS | | FF 2 | | FF 1 | | FF 0 | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | X | 0 | X | 0 | X |
| 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | X | 0 | X | 0 | X |
| 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | X | 0 | X | X | 1 |
| 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | X | 0 | X | X | 1 |
| 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | X | X | 1 | 0 | X |
| 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | X | X | 1 | 0 | X |
| 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | X | X | 1 | X | 1 |
| 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | X | X | 1 | X | 1 |
| 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | X | 1 | 0 | X | 0 | X |
| 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | X | 1 | 0 | X | 0 | X |
| 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | X | 1 | 0 | X | X | 1 |
| 0 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | X | 1 | 0 | X | X | 1 |
| 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | X | 1 | X | 1 | 0 | X |
| 0 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | X | 1 | X | 1 | 0 | X |
| 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | X | 1 | X | 1 | X | 1 |
| 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | X | 1 | X | 1 | X | 1 |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | X | 0 | X | 1 | X |
| 1 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | X | 0 | X | 1 | X |
| 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | X | 1 | X | X | 1 |
| 1 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | X | 1 | X | X | 0 |
| 1 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | X | X | 0 | 1 | X |
| 1 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | X | X | 1 | 0 | X |
| 1 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | X | X | 1 | X | 0 |
| 1 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | X | X | 1 | X | 0 |
| 1 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | X | 0 | 0 | X | 1 | X |
| 1 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | X | 0 | 1 | X | 0 | X |
| 1 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | X | 1 | 0 | X | X | 0 |
| 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 1 | X | 1 | 0 | X | X | 0 |
| 1 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | X | 1 | X | 1 | 1 | X |
| 1 | 1 | 1 | 0 | 1 | 0 | 0 | 1 | 1 | 1 | X | 1 | X | 1 | 1 | X |
| 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | X | 1 | X | 1 | X | 1 |
| 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | X | 1 | X | 1 | X | 1 |

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| ESTADOS | CÓDIGOS | VALOR | SAÍDA |
|  | 000 | -- | A’R’ |
|  | 001 | R$0,00 | A’R’ |
|  | 010 | R$0,50 | A’R’ |
|  | 011 | R$1,00 | AR’ |
|  | 100 | R$1,50 | A’R’ |
|  | 101 | R$2,00 | A’R |
|  | 110 | R$2,50 | AR |

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|  | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 | 0 |
|  | 0 | 0 | 0 | 0 |  | 0 | 1 | 0 | 0 |
|  | X | X | X | X |  | X | X | X | X |
|  | X | X | X | X |  | X | X | X | X |

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|  | X | X | X | X |  | X | X | X | X |
|  | X | X | X | X |  | X | X | X | X |
|  | 1 | 1 | 1 | 1 |  | 1 | 1 | 1 | 1 |
|  | 1 | 1 | 1 | 1 |  | 0 | 0 | 1 | 1 |

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|  |  |  |  |  |  |  |  |  |  |
|  | 0 | 0 | 0 | 0 |  | 0 | 0 | 1 | 1 |
|  | X | X | X | X |  | X | X | X | X |
|  | X | X | X | X |  | X | X | X | X |
|  | 0 | 0 | 0 | 0 |  | 0 | 1 | 0 | 0 |

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|  |  |  |  |  |  |  |  |  |  |
|  | X | X | X | X |  | X | X | X | X |
|  | 1 | 1 | 1 | 1 |  | 0 | 1 | 1 | 1 |
|  | 1 | 1 | 1 | 1 |  | 1 | 1 | 1 | 1 |
|  | X | X | X | X |  | X | X | X | X |

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|  | 0 | 0 | X | X |  | 1 | 1 | X | X |
|  | 0 | 0 | X | X |  | 1 | 0 | X | X |
|  | 0 | 0 | X | X |  | 1 | 1 | X | X |
|  | 0 | 0 | X | X |  | 1 | 0 | X | X |

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|  | X | X | 1 | 1 |  | X | X | 0 | 1 |
|  | X | X | 1 | 1 |  | X | X | 0 | 0 |
|  | X | X | 1 | 1 |  | X | X | 1 | 1 |
|  | X | X | 1 | 1 |  | X | X | 0 | 0 |

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|  | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 | 0 |
|  | 0 | 0 | 1 | 1 |  | 0 | 0 | 1 | 1 |
|  | 1 | 1 | 0 | 0 |  | 1 | 1 | 0 | 0 |
|  | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 | 0 |

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|  |  |  |  |  |  |  |  |  |  |
|  | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 | 0 |
|  | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 | 0 |
|  | 1 | 1 | 0 | 0 |  | 1 | 1 | 0 | 0 |
|  | 0 | 0 | 1 | 1 |  | 0 | 0 | 1 | 1 |