Which of these binary numbers are in Gray code order? (a) 0000, 0001, 0010, 0011 (b) 1000, 1001, 1011, 1111 (c) 010, 110, 011, 010 (d) 1000, 1001, 1011, 1010

Step 1: Answer

(d) 1000, 1001, 1011, 1010

Step 2: Explanation

Binary code with correspondent gray code

|  |  |  |  |
| --- | --- | --- | --- |
| Decimal | Binary | Gray | Decimal of Gray |
| 0 | 0000 | 0000 | 0 |
| 1 | 0001 | 0001 | 1 |
| 2 | 0010 | 0011 | 3 |
| 3 | 0011 | 0110 | 2 |
| 4 | 0100 | 0110 | 6 |
| 5 | 0101 | 0111 | 7 |
| 6 | 0110 | 0101 | 5 |
| 7 | 0111 | 0100 | 4 |
| 8 | 1000 | 1100 | 12 |
| 9 | 1001 | 1101 | 13 |
| 10 | 1010 | 1111 | 15 |
| 11 | 1011 | 1110 | 14 |
| 12 | 1100 | 1010 | 10 |
| 13 | 1101 | 1011 | 11 |
| 14 | 1110 | 1001 | 9 |
| 15 | 1111 | 1000 | 8 |

According to gray code order

A 0,1,3,2 b 12,13,14,8 c 3,5,2,3 d 12,13,14,15

Hence option d is correct option