1. 2002_{10}

```
2002 | 2
2002 | 1001 | 2
  0  | 1000 | 500 | 2
       1   | 500 | 250 | 2
              0  | 250 | 125 | 2
                   0  | 124 | 62 | 2
                        1  | 62 | 31 | 2
                             0  | 30 | 15 | 2
                                  1  | 14 | 7 | 2
                                       1 | 6 | 3 | 2
                                          1 | 2 | 1 | 2
                                             1 | 0 | 0
                                                  1
```

$2002_{10} = 11111010010_2$

Код Грея:
11111010010
01111101001
‾‾‾‾‾‾‾‾‾‾‾
10000111011

Обратно:
0: 1
1: 1 + 0 = 1
2: 1 + 0 + 0 = 1
3: 1 + 0 + 0 + 0 = 1
4: 1 + 0 + 0 + 0 + 0 = 1
5: 1 + 0 + 0 + 0 + 0 + 1 = 0
6: 1 + 0 + 0 + 0 + 0 + 1 + 1 = 1
7: 1 + 0 + 0 + 0 + 0 + 1 + 1 + 1 = 0
8: 1 + 0 + 0 + 0 + 0 + 1 + 1 + 1 + 0 = 0
9: 1 + 0 + 0 + 0 + 0 + 1 + 1 + 1 + 0 + 1 = 1
10: 1 + 0 + 0 + 0 + 0 + 1 + 1 + 1 + 0 + 1 + 1 = 0

$11111010010_2 = 2002_{10}$

2. 272_{10}

```
272 │2
272 │136│2
 0   136│68 │2
      0   68 │34 │2
           0   34 │17 │2
                0   16 │8 │2
                     1   8 │4 │2
                          0  4 │2 │2
                              0  2 │1 │2
                                  0  0 │0
                                      1
```

$272_{10} = 100010000_2$

Код Грея:

100010000
010001000
110011000

Обратно:
0: 1
1: 1 + 1 = 0
2: 1 + 1 + 0 = 0
3: 1 + 1 + 0 + 0 = 0
4: 1 + 1 + 0 + 0 + 1 = 1
5: 1 + 1 + 0 + 0 + 1 + 1 = 0
6: 1 + 1 + 0 + 0 + 1 + 1 + 0 = 0
7: 1 + 1 + 0 + 0 + 1 + 1 + 0 + 0 = 0
8: 1 + 1 + 0 + 0 + 1 + 1 + 0 + 0 + 0 = 0

$100010000_2 = 272_{10}$

3. $31 + 5 = 36_{10}$

```
36 │ 2
36 │ 18 │ 2
 0   18 │ 9 │ 2
      0   8 │ 4 │ 2
          1   4 │ 2 │ 2
              0   2 │ 1 │ 2
                  0   0 │ 0
                      1
```

$36_{10} = 100100_2$

Код Грея:
| 100100 |
| 010010 |
| 110110 |

Обратно:
0: 1
1: $1 + 1 = 0$
2: $1 + 1 + 0 = 0$
3: $1 + 1 + 0 + 1 = 1$
4: $1 + 1 + 0 + 1 + 1 = 0$
5: $1 + 1 + 0 + 1 + 1 + 0 = 0$

$100100_2 = 36_{10}$

4. 937_{10}

```
937 | 2
936 | 468 | 2
 1    468 | 234 | 2
        0   234 | 117 | 2
               0   116 | 58 | 2
                     1   58 | 29 | 2
                          0   28 | 14 | 2
                               1   14 | 7 | 2
                                    0   6 | 3 | 2
                                         1   2 | 1 | 2
                                              1   0 | 1
                                                   1
```

$937_{10} = 1110101001_2$

Код Грея:

| 1110101001 |
| 0111010100 |
| 1001111101 |

Обратно:
0: 1
1: $1 + 0 = 1$
2: $1 + 0 + 0 = 1$
3: $1 + 0 + 0 + 1 = 0$
4: $1 + 0 + 0 + 1 + 1 = 1$
5: $1 + 0 + 0 + 1 + 1 + 1 = 0$
6: $1 + 0 + 0 + 1 + 1 + 1 + 1 = 1$
7: $1 + 0 + 0 + 1 + 1 + 1 + 1 + 1 = 0$
8: $1 + 0 + 0 + 1 + 1 + 1 + 1 + 1 + 0 = 0$
9: $1 + 0 + 0 + 1 + 1 + 1 + 1 + 1 + 0 + 1 = 1$

$1110101001_2 = 937_{10}$