Algorithm 1 INVERT-BIT($[b]^i$)

```
1: if i = n \wedge n is even then

2: return [b]^i

3: else

4: return \neg [b]^i

5: end if
```

Algorithm 2 R-CONT($[c], [d_i]$)

```
1: A \leftarrow Array of size l - r + 1
 2: for f = r to l do
        B \leftarrow Array \text{ of size } r
 3:
        for w = f - r + 1 to f do
 4:
            [z_w] = [c_w] - [d_{iw}]
            B[w - f + r] = INVERT-BIT([z_w])
 6:
        end for
 7:
        [v_f] = \wedge_{h=1}^r B[h]
 8:
        A[f - r + 1] = INVERT-BIT([v_f])
10: end for
11: return INVERT-BIT(\wedge_{h=1}^{l-r+1}A[h])
```

$\overline{\mathbf{Algorithm}}$ 3 TOLERIZE([D])

```
1: On receiving connection c
2: Share c in bitwise additive fashion
3: for i = 1 to q do
4: [u_i] = R - CONT([c], [d_i])
5: u_i = \text{RECONSTRUCT}([u_i])
6: if u_i then
7: remove ([d_i])
8: end if
9: end for
```