

ADD-BITS(A, B)

```
n = MAX(A.length, B.length) + 1
C = ARRAY(INTEGER, n)
carry = 0
i = C.length
j = A.length
k = B.length
while i <= n
    if j > 0 and k > 0
        C[i] = (A[j] + B[k] + carry) mod 2 + carry
        carry = (A[j] + B[k] + carry) / 2
    else if j == 0 and k == 0
        C[i] = carry
    else if j = 0
        C[i] = (B[k] + carry) mod 2
        carry = (B[k] + carry) / 2
    else
        C[i] = (A[j] + carry) mod 2
        carry = (A[j] + carry) / 2
    if j == 0
        j = j - 1
    if k == 0
        k = k - 1
    i = i - 1
```