

The matrix is not square.

The matrix is invertible.

Ciphertext: WBDBQCWBVHYV

Ciphertext column vectors: [array([22, 1], dtype=int32),
array([3, 1], dtype=int32), array([16, 2], dtype=int32),
array([22, 1], dtype=int32), array([21, 7], dtype=int32),
array([24, 21], dtype=int32)]

Plaintext: ATTACKATDAWN

Plaintext column vectors: [array([0, 19], dtype=int32),
array([19, 0], dtype=int32), array([2, 10], dtype=int32),
array([0, 19], dtype=int32), array([3, 0], dtype=int32),
array([22, 13], dtype=int32)]

The determinant = 0.

In [182]: