1. Please answer questions 1 - 10 refer to the following arrays. If the operation cannot be done, say "not possible".

$$A = \begin{pmatrix} 1 & 1 \\ 1 & 0 \\ 1 & 0 \end{pmatrix} \quad B = \begin{pmatrix} 1 & 1 \\ 1 & 0 \\ 0 & 1 \end{pmatrix} \quad C = \begin{pmatrix} 0 & 1 & 1 \\ 1 & 1 & 0 \\ 1 & 0 & 1 \end{pmatrix} \quad D = \begin{pmatrix} -1 & 2 & 1 \\ 1 & 0 & 1 \\ 2 & 1 & 4 \end{pmatrix}$$

(1) A + B

In [ ]:

(2) C + B

In [ ]:

(3) A - B

In [ ]:

(4) C · D (matrix multiplication)

In [ ]:

(5) 2B

In [ ]:

(6) B^T

In [ ]:

(7) A ∨ B

In [ ]:

(8) A ∧ B

In [ ]:

(9) $C \times A$ (Boolean matrix multiplication)

In [ ]:

(10) Draw a 5×5 Identify matrix

In [ ]:

2. If A is a symmetric matrix, find u, v, and w:

$$A = \begin{pmatrix} 2 & w & u \\ 7 & 0 & v \\ 1 & -3 & 4 \end{pmatrix}$$

In [ ]:

3. If A is a $n \times n$ invertible matrix, please use gaussian elimination method to find A^{-1}

$$A = \begin{pmatrix} 2 & w & u \\ 7 & 0 & v \\ 1 & -3 & 4 \end{pmatrix}$$

In [ ]: