$$a = \begin{bmatrix} 1 & 2 \\ b = \begin{bmatrix} 10 & 100 \end{bmatrix} \\ S = \begin{bmatrix} a & b \end{bmatrix} \\ C = b \end{bmatrix}$$

$$a = 1$$

$$b = 10$$

$$a = 2$$

$$b = 10$$

$$out = 11$$

$$out = 101$$

$$out = 12$$

$$out = 102$$

$$out_{comb} = \begin{bmatrix} 11 & 101 \end{bmatrix}$$

$$out_{comb} = \begin{bmatrix} 12 & 102 \end{bmatrix}$$