

Q5

natalie coplin

(6)

$$A = \begin{bmatrix} 1 & 1 & 3 \\ 1 & 2 & 2 \\ 1 & 0 & -1 \end{bmatrix}$$

$$B = \begin{bmatrix} 1 & 2 & 3 \\ 4 & 0 & 6 \\ 1 & 3 & -1 \end{bmatrix}$$

$$A \times B = (1 \times 1) + (1 \times 4) + (3 \times 1) \\ (1 \times 2) + (2 \times 0) + (2 \times 3) \\ (1 \times 3) + (0 \times 6) + (-1 \times -1)$$

$$= \begin{array}{r} 1 + 4 + 3 \\ 2 + 2 + 6 \\ 3 + 0 + 1 \end{array}$$

$$= \begin{array}{r} 8 \\ 10 \\ 4 \end{array}$$

A B C

D E F

G H I

J K L

M N O

P Q R

$$1 \times 1 = a \times e$$

$$1 \times 4 = b \times g$$

$$1 \times 2 = a \times f$$

1 x

$$A \times B = \begin{bmatrix} ae + bg & af + bh \\ ce + dg & cf + dh \end{bmatrix}$$