

## Matrix algebra – addition and multiplication

### Exercise 2.9

Compute the products  $AB$  and  $BA$ , if possible, when  $A$  and  $B$  are, respectively

a.  $A = \begin{pmatrix} 0 & -2 \\ 3 & 1 \end{pmatrix}$  and  $B = \begin{pmatrix} -1 & 4 \\ 1 & 5 \end{pmatrix}$

b.  $A = \begin{pmatrix} 8 & 3 & -2 \\ 1 & 0 & 4 \end{pmatrix}$  and  $B = \begin{pmatrix} 2 & -2 \\ 4 & 3 \\ 1 & -5 \end{pmatrix}$

c.  $A = \begin{pmatrix} -1 & 0 \\ 2 & 4 \end{pmatrix}$  and  $B = \begin{pmatrix} 3 & 1 \\ -1 & 1 \\ 0 & 2 \end{pmatrix}$

d.  $A = \begin{pmatrix} 0 \\ -2 \\ 4 \end{pmatrix}$  and  $B = (0 \ -2 \ 3)$