

Question 1

$$A = \begin{pmatrix} 8 & -1 & 7 \\ -5 & 2 & 5 \\ 3 & 0 & 2 \end{pmatrix} \quad B = \begin{pmatrix} -2 & 8 & 0.5 \\ 2 & 5 & 2 \\ 0 & -9 & 1 \end{pmatrix}$$

$r \times c$

3×3

$r \times c$

3×3

i) AB

$$-16 + -2 + 0$$

$$64 + -5 + -63$$

$$4 + -2 + 7$$

$$-10 + 4 + 0$$

$$-40 + 10 + -45$$

$$2.5 + 4 + 5$$

$$-6 + 0 + 1$$

$$24 + 0 + -18$$

$$1.5 + 0 + 2$$

$$\begin{pmatrix} -18 & -4 & 9 \\ -6 & -75 & 6.5 \\ -5 & 6 & 3.5 \end{pmatrix}$$

$$B = \begin{pmatrix} -2 & 8 & 0.5 \\ 2 & 5 & 2 \\ 0 & -9 & 1 \end{pmatrix} \quad A = \begin{pmatrix} 8 & -1 & 7 \\ -5 & 2 & 5 \\ 3 & 0 & 2 \end{pmatrix}$$

$r \times c$

3×3

$r \times c$

3×3

ii) BA

$$-16 + -40 + 15$$

$$24 + 16 + 0$$

$$-14 + 40 + 0$$

$$16 + -25 + 16$$

$$-2 + 10 + 0$$

$$14 + 25 + 4$$

$$0 + 45 + 3$$

$$0 + -18 + 0$$

$$0 + -45 + 2$$

$$54.5$$

$$18$$

$$26$$

$$-3$$

$$8$$

$$43$$

$$48$$

$$-18$$

$$-48$$