

Iyamu uchenna precious

19/ENG06/031

MAT102

MATRIC NO: 19/ENG 06/031  
IYAMU UCHENNA PRECIOUS  
MECHANICAL ENGINEERING  
MATH 102

$$A = 3i + 4j - 6k$$
$$B = 5i - 11j + 2k$$
$$C = 7i - 9j + k$$

①  $A \cdot C + B \cdot C$

$$A \cdot C = (3 \times 7) + (4 \times -9) + (-6 \times 1)$$
$$= 21 - 36 - 6$$
$$= -14$$
$$A \cdot C + B \cdot C = (-14) + 114$$
$$= 100$$

②  $(A+B) \cdot C$

$$A+B = (3i + 4j - 6k) + (5i - 11j + 2k)$$
$$= 8i - 7j - 4k$$
$$(A+B) \cdot C = (8i - 7j - 4k) \cdot (7i - 9j + k)$$
$$= 56 - 63 - 4$$
$$= -11$$

3 A XAXC

$$\begin{array}{c|c} \text{Brc} & \text{JK} \\ \hline 5 & -11 \ 2 \\ \hline 7 & -7 \ 1 \end{array}$$

$$\begin{array}{c|c|c|c|c} i & -11 & 2 & -7 & 5 \ 2 \\ \hline & -7 & 1 & 7 & 1 \\ \hline & & & & \text{JK} \\ \hline & & & & 5 \ -11 \\ \hline & & & & 7 \ -7 \end{array}$$

$\hat{=} 3i + 9j + 33k$