

TADESE VICTOR ADEDAMOLA

ELECT/ELECT ENGINEERING

19/ENG04/055

MAI 102 ASSIGNMENT

1)  $A \cdot C + B \cdot C$

$$A \cdot C = (3i + 4j - 6k)(7i - 7j + k)$$

$$= 21 + (-28) - 6$$

$$= -13$$

$$B \cdot C = (5i - 11j + 2k)(7i - 7j + k)$$

$$= 35 + 77 + 2$$

$$= 114$$

$$= -13 + 114 = 101$$

2)  $(A - B) \cdot C$

$$A - B = (3i + 4j - 6k) - (5i - 11j + 2k)$$

$$= -2i + 15j - 8k$$

$$(A - B) \cdot C = (-2i + 15j - 8k)(7i - 7j + k)$$

$$= -14 - 105 - 8$$

$$= -127$$

3)  $A \cdot (B \times C)$

	+	-	+	
	3	4	-6	
	5	-11	2	
	7	-7	1	

=	3	-11	2	-4	5	2	-6	5	-11
		-7	1		7	1		7	-7

$$= 3(-11 + 14) - 4(5 - 14) - 6(-35 + 77)$$

$$= 9 + 36 - 252$$

$$= -207$$