

EREN ISALAH UNKDO

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Computer Engineering

$$A = 3i + 4j - 6k$$

$$B = 5i - 11j + 2k$$

$$C = 7i - 7j + k$$

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

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

$$= (3 \cdot 7) +$$

$$21i - 28j - 6k$$

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

$$= 35i + 77j + 2k$$

$$A \cdot C + B \cdot C$$

$$21i - 28j - 6k + 35i + 77j + 2k$$

$$= 56i + 49j - 4k$$

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

$$(A-B) = (8i + 4j - 6k) - (5i - 11j + 2k)$$

$$= 3i + 4j - 6k - 5i + 11j - 2k$$

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

$$(A-B) \cdot c$$

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

$$= -14j - 105j - 8k$$

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

$$(B \times c)$$

	i	j	k
	5	-11	2
	7	-7	1

i	-11	2	-j	5	2	-4k	5	-11
	-7	1		7	1		7	-7

$$i[-11+14] - j[5-14] + k[-77+35]$$

$$3i + 9j - 42k$$

$$A \cdot (B \times c)$$

$$(3i + 4j - 6k) \cdot (3i + 9j - 42k)$$

$$9i + 36j + 252k$$