

$$L(\boxed{}) = \boxed{}C + C\boxed{}$$

left

$$L(A+B) = (A+B)C + C(A+B) \\ = AC + BC + CA + CB = \textcircled{?}$$

$$L(A) + L(B) = (AC + CA) + (BC + CB) \\ = AC + BC + CA + CB = \textcircled{?}$$

$$L(2A) = (2A)C + C(2A) = 2AC + 2CA$$

$$2L(A) = 2[AC + CA] = 2AC + 2CA$$

ca

~~$$L(\boxed{}) = \boxed{}C + C\boxed{}$$~~

$$= \overbrace{(2A + \beta B)}^{\text{left}} C + C \overbrace{(2A + \beta B)}^{\text{right}}$$

$$= ([2\vec{a}_i] + [\beta \vec{b}_i]) C_j$$

$$[2\vec{a}_i C_j + \beta \vec{b}_i C_j + 2\vec{c}_i A_j + \beta \vec{c}_i B_j]$$

right

$$2L(A) + \beta L(B) \\ = 2[AC + CA] + \beta[BC + CB]$$

$$= 2AC + 2CA + \beta BC + \beta CB$$

$$[2\vec{a}_i C_j + 2\vec{c}_i A_j + \beta \vec{b}_i C_j + \beta \vec{c}_i B_j]$$