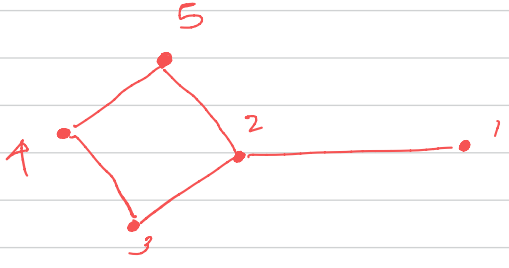
$$(1-x)(1-y) = 1-y-x+xy \simeq -y-x+xy \quad \text{---} \quad (1)$$

$$H = H_A + H_B$$

$$H_A = A\sum_{i\in V} x_i + B\sum_{(u,v)\in E}(1-x_u)(1-x_v)$$

Let



$$H = A[x_1+x_2+x_3+x_4+x_5] + B[(1-x_1)(1-x_2)+(1-x_2)(1-x_3)+(1-x_3)(1-x_4)+(1-x_4)(1-x_5)]$$

using (1)

$$H = A[x_1+x_2+\cdots+x_5] + B[-x_3-x_4+x_3x_4-x_1-x_2+x_1x_2 - \cdots]$$

$$= x_1[A-B] + x_2[A-2\cdot B] + \cdots + B\cdot x_1x_2 + B\cdot x_2x_3 + \cdots$$