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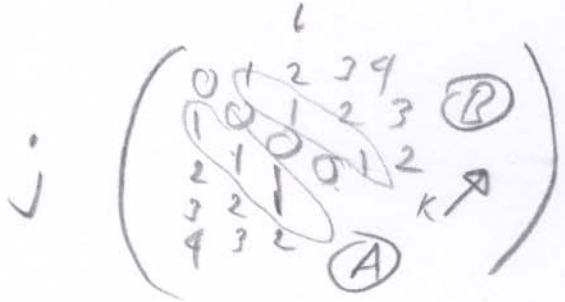
$$\langle R^2 \rangle = \sum_{i=1}^{n} \sum_{j=1}^{n} (r_i \cdot r_j)$$

$$= b^2 \sum_{i=1}^{n} \sum_{j=1}^{n} \frac{1}{(2-1)^{|i-j|}}$$



$$b^2 \, n \sum_{k=-\infty}^{\infty} \frac{1}{(2-1)^k}$$

about n of each

k.s is OK because when k is high

$$\frac{1}{(2-1)^k} \cong 0$$

Also there are 2 sets (A & B)

so $-\infty$ to ∞