



The diagram consists of a large blue oval representing a total system. Inside this oval, on the left, is a smaller orange oval labeled 'A'. To the right of 'A' is a label 'B'. A green double-headed arrow connects 'A' and 'B'. Above the orange oval, within the blue oval, is a red rectangular box containing the equation  $\rho_{total} \neq \rho_A \otimes \rho_B$ .

$$\rho_{total} \neq \rho_A \otimes \rho_B$$

A

B