

Particle nature of matter

Decide whether each of the statements below is true or false. Give reasons for your answers in terms of your knowledge of the particle nature of matter.

Statement 1: "The particles in hot water move faster and are further apart than those in cold water."

Is this true? *True / False*

Reason:

Statement 2: "The particles in orange juice are close together but they can move around."

Is this true? *True / False*

Reason:

Statement 3: "When a solid cools, the particles vibrate more slowly and get smaller."

Is this true? *True / False*

Reason:

Statement 4: "Liquid nitrogen has the formula N₂. When liquid nitrogen boils the gas has the formula N."

Is this true? *True / False*

Reason: