

Answer on Question #48915, Physics, Other

Question:

if any of the components of a vector is non-zero, then can the vector be zero??

Answer:

Zero vector is a vector that has zero magnitude. It is possible only if all components of a vector are zero:

$$\sqrt{x^2 + y^2 + z^2} = 0 \quad \Rightarrow \quad x = y = z = 0$$

Answer: no, it can't.