

[12pt]article amsmath, amssymb, xcolor [margin=1in]geometry

# Vector Space Proof Demonstration

*Generated by the Khwarizmi Symbolic System*

**Goal:** Prove that  $1 \cdot (u + v) = (u + v)$ .

**Proof:**

$$(2) \ 1 \cdot (u + v) = (u + v) \quad [VS\_Scalar\_Id]$$

**Hence,**  $(u + v) = (u + v)$

*Proof log automatically generated by Khwarizmi. All transformations follow registered axioms.*