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

Vector Space Proof Demonstration

Generated by the Khwarizmi Symbolic System

Goal: Prove that $-1 \cdot -1 \cdot u = u$

$$
\begin{aligned}
&\text{Start:} \quad -1 \cdot -1 \\
(1)\ &-1 \cdot -1 = 1 \qquad\qquad [Scalar\_Arith] \\
(1a)\ &-1 \cdot -1 \cdot u = 1 \cdot u \quad [Scalar\_Arith] \\
\hline
(2)\ &1 \cdot u = u \qquad\qquad\quad [VS\_Scalar\_Id]
\end{aligned}
$$

Final Result: u

Q.E.D.