

## **Proof that $-1 + (-1) = -2$**

**Axiom:  $a(b + c) = ab + ac$**

**Axiom:  $1a = a$**

**Synapse:  $-1a = -a$**

**Axiom:  $ab = ba$**

**Theorem:  $-1 + (-1) = -2$ .**

**Proof:  $-1 + (-1) = -1(1) + (-1)(1) = -1(1 + 1) = -1(2) = -2$ .**



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