proof: Let $\epsilon > 0$ be any arbitrary positive real number.
Since $a_n \longrightarrow L$ and $M > 0$ $\exists$ $n_0 \in \mathbb{N}$ such that $\forall n > n_0$ $n \in \mathbb{N}$ $|a_n - L| < \dfrac{\epsilon}{M}$
$\implies$ $|Ma_n - ML| < \epsilon$ $\forall n > n_0$ $n \in \mathbb{N}$
Since ϵ was arbitrary we have $\forall \epsilon > 0$ $\exists$ $n_0 \in \mathbb{N}$ such that $\forall n > n_0$

$$|Ma_n - ML| < \epsilon$$

Hence $Ma_n \longrightarrow ML$ Hence proved.