8.

Proof:

Since sequence $\{a_n\}_{n=1}^{\infty}$ tends to limit *L* as $\mathrm{n} \to \infty$

We have $(\nabla\varepsilon > 0)(\exists \mathrm{n} \in \mathrm{N})(\nabla \mathrm{m} \geq \mathrm{n})[|a_m - \mathrm{L}| < \varepsilon]$

For any fixed number M>0

$\mathrm{M}|a_m - \mathrm{L}| < \mathrm{M}\varepsilon$ holds for $(\nabla \mathrm{M}\varepsilon > 0)(\exists \mathrm{n} \in \mathrm{N})(\nabla \mathrm{m} \geq \mathrm{n})$

So, the sequence $\{Ma_n\}_{n=1}^{\infty}$ tends to the limit *ML* as $\mathrm{n} \to \infty$

The statement has been proved.