Then $N \subseteq M \iff \forall M / \bar{M}$ is finite.

Proof: Let $N = \langle x_1, x_2, \ldots, x_n \rangle$ (w.a.t., $N=M$).

Let $\{x_i + J_M \}_{i=1}^n$ be a basis for the space. Then $\{x_i + J_M \}_{i=1}^n$ generates $M$.

$$J_M = \frac{J_M}{J_M} = \frac{J_M}{J_M} = 0$$

$J_M$ is a trivial $R$-module. Then $M$ is annihilated by $J_M$.

Hence $M / J_M$ is a $f.g.$ $R$-module. Then $M$ is annihilated by $J_M$.

Result: Field: $K = \frac{R}{J_M}$

Suppose $R$ is a local ring with maximal $J_M$. Then

$R/kahana 2$
\[ \sin x \neq R(x), \quad M = N \]

So, \( N + 2M = M \), so by Case 1, \( M = 0 \),

\[ (\text{because } M(x) \text{ is a high-pass filter}) \]