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Local $\mathbb{R}$ -algebras

$\mathbb{R}[x_1,\dots,x_n]_{\mathfrak{m}_0}$	n	
$p \in V$ be a singular point $\mathcal{O}_{V,p}$		
$\mathbb{R}\left\{\{x_1,\dots,x_n\}\right\}$	n	

$$\frac{\mathcal{C}^\infty(\mathbb{R}^n)}{I} \rightarrow \mathcal{C}^\infty(\{0\}) \cong \mathbb{R}$$

	cotangent	
$\mathbb{R}$	0	
$\frac{\mathbb{R}[x]}{(x^k)}$	1	
$\mathbb{R}[[x_1,\dots,x_n]]$	n	
$\mathcal{C}^\infty_{\mathbb{R}^n,p}$	n	
$\mathcal{C}_{\mathbb{R}^n,p}$	$\infty?$	

Current note has 0 direct children and 0 total descendants.

- [stem](#)
 - [subobjects of and functions on \$\mathbb{R}^n, S^n, \mathbb{C}^n\$ and its quotients \$\Gamma \backslash \mathbb{R}^n, \Gamma \backslash \mathbb{C}^n\$](#)
 - [Local \$\mathbb{R}\$ -algebras](#)

And it has 39 siblings.

- [stem](#)
 - [subobjects of and functions on \$\mathbb{R}^n, S^n, \mathbb{C}^n\$ and its quotients \$\Gamma \backslash \mathbb{R}^n, \Gamma \backslash \mathbb{C}^n\$](#)
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 - [Open subsets of \$\mathbb{R}^n\$ with \$\mathcal{C}^2\$ boundary.](#)
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 - [Discrete cocompact subgroups of \$\mathbb{R}^n\$, flat tori](#)
 - [Ramified germs of smooth and holomorphic functions](#)
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 - [Open subsets of \$\mathbb{R}^n\$ equipped with the flat metric](#)
 - [Closed subsets of \$\mathbb{R}^n\$ equipped with smooth functions](#)

- Quasi-analytic smooth functions on $\mathbb{R}$
- Star-shaped subsets of $\mathbb{R}^n$
- ODEs in $\mathbb{R}^n \leftrightarrow$ Vector fields in $\mathbb{R}^n$