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skew polynomial ring

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If (σ, δ) is a left skew derivation on R , then we can construct the *(left) skew polynomial ring* $R[\theta; \sigma, \delta]$, which is made up of polynomials in an indeterminate θ and left-hand coefficients from R , with multiplication satisfying the relation

$$\theta \cdot r = \sigma(r) \cdot \theta + \delta(r)$$

for all r in R .