Géométrie Différentielle 1 - Notations Cheat Sheet

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- $\gamma(s)$: a curve
- $\dot{\gamma}(s)$: the velocity vector of the curve
- $V_\gamma(s) = \|\dot{\gamma}(s)\|$: the speed of the curve
- $\ddot{\gamma}(s)$: the acceleration vector of the curve
- $T_{s_0}\gamma$: tangent line of γ at s_0
- $\Pi_{s_0}\gamma$: osculating plane at $\gamma(s_0)$
- $l(\gamma)$: the length of the curve γ
- $S_\gamma(t)$: the natural or arc length parameter of γ
- Γ_γ : vector field along γ
- $T_\gamma(t) = T(\gamma, t)$: unit tangent vector of γ

- $N_\gamma(t)$: principal normal vector field of γ
- $K_\gamma(t)$: curvature vector field of γ
- $\kappa_\gamma(t) = \|K_\gamma(t)\|$: scalar curvature of γ
- $B_\gamma(t)$: binormal vector field along γ
- $\tau_\gamma(t)$: torsion of γ