

## 1 Vector Sketch (Curvilinear Coordinates)

(4pts) Sketch each of the vector fields below.

(a)  $\vec{K} = s \hat{s}$

(b)  $\vec{L} = \frac{1}{s} \hat{\phi}$

(c)  $\vec{M} = \sin \phi \hat{s}$

(d)  $\vec{N} = \sin(2\pi s) \hat{\phi}$