

## 1 Vector Sketch (Curvilinear Coordinates)

Sketch each of the vector fields below by hand. You can check your answers using technology. Make sure that you show enough arrows to show the key features of the graph.

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

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

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