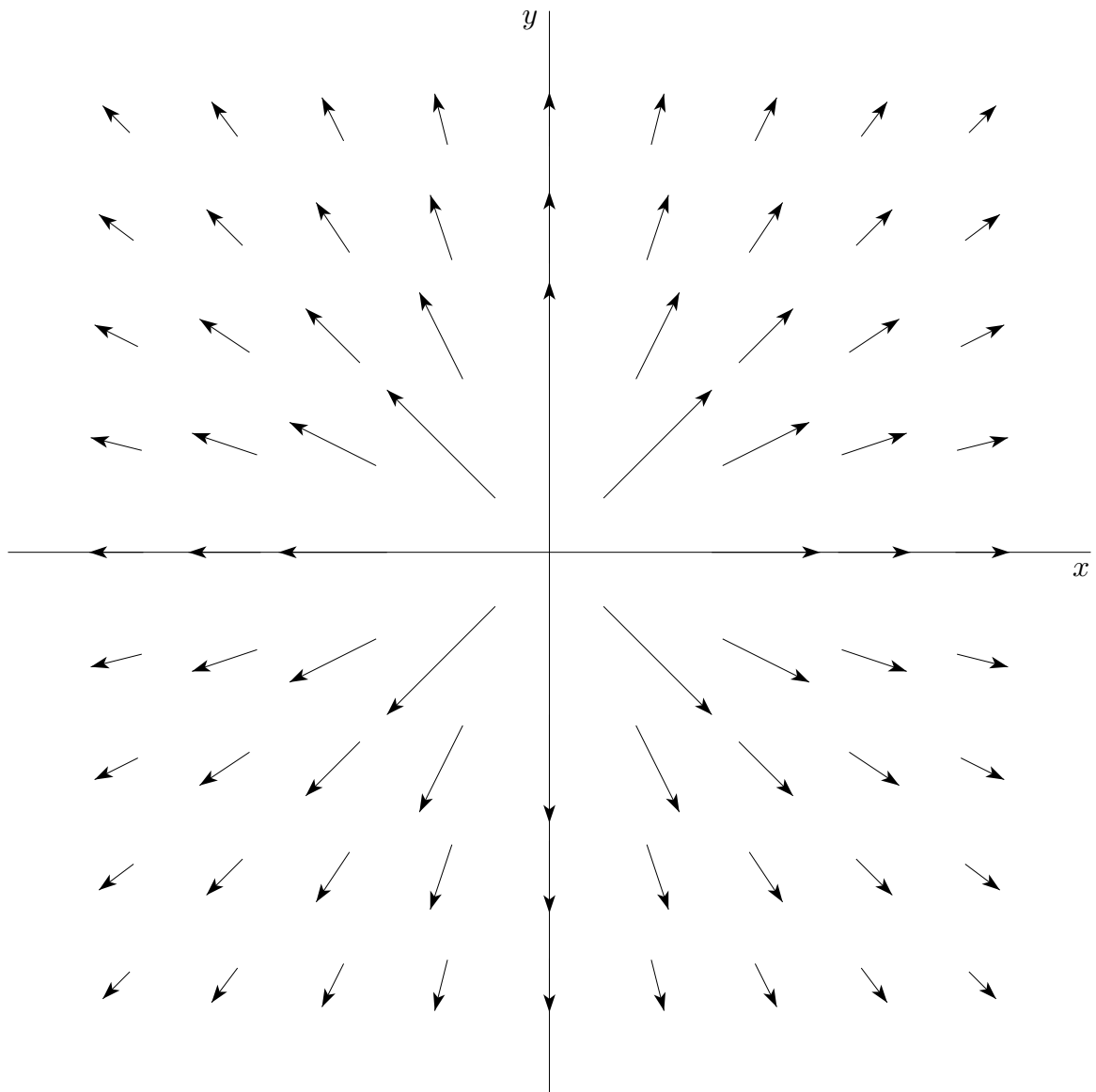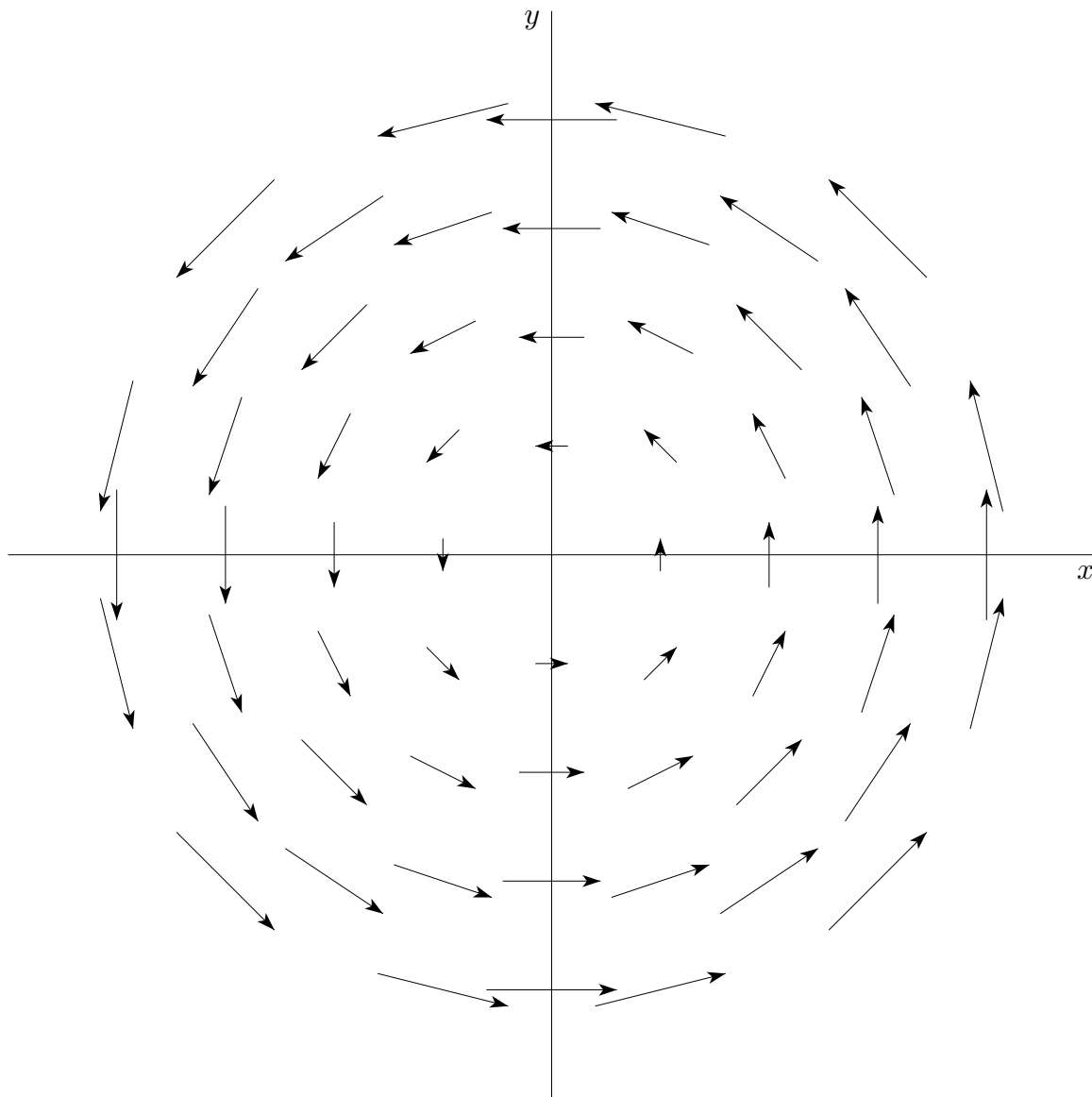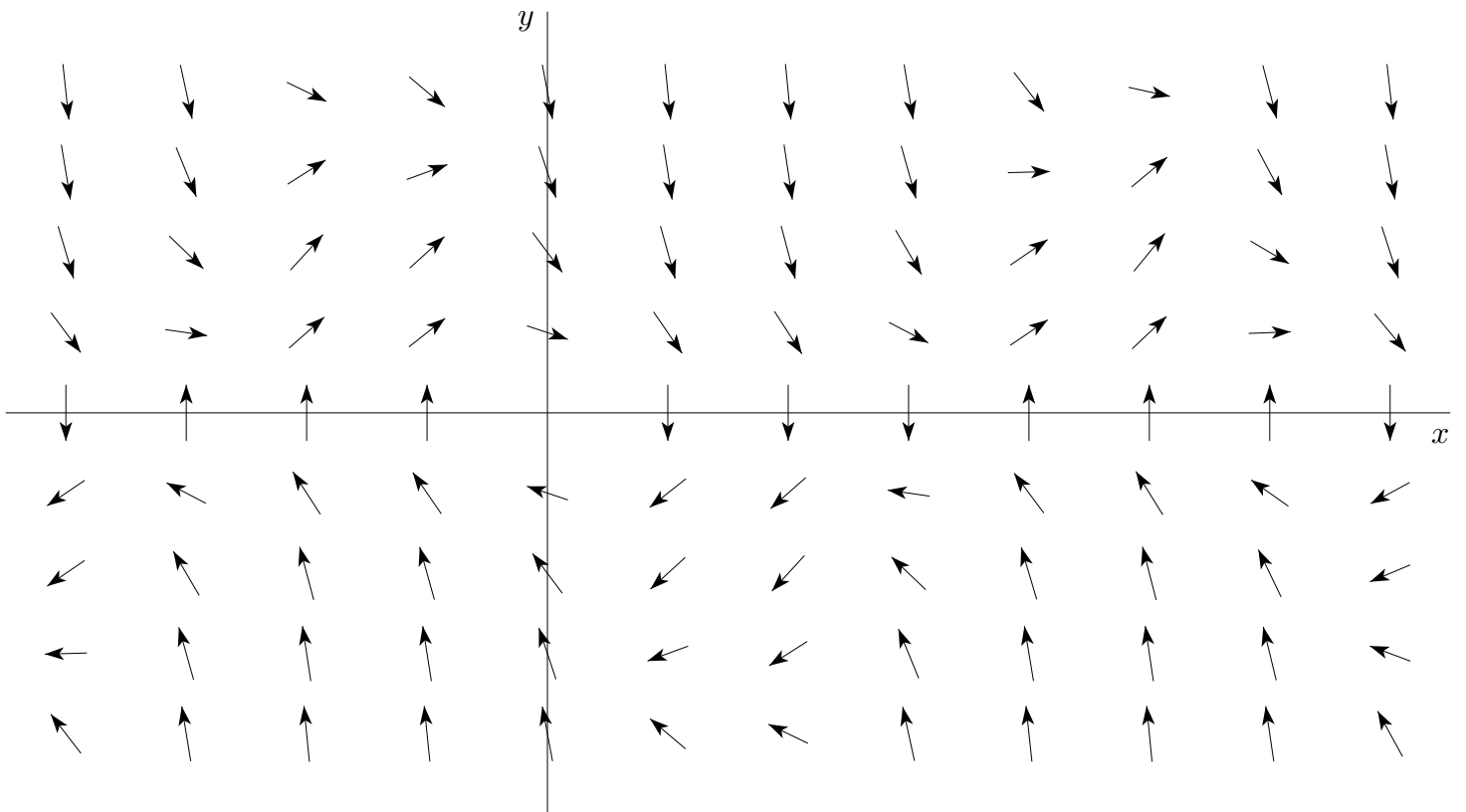# Point Source

vector field $\vec{v} = m\frac{\hat{r}}{r}$

Vortex

vector field $\vec{v} = \Omega(-y\hat{\imath} + x\hat{\jmath})$

The Damped Nonlinear Pendulum

direction field for $x' = y, \; y' = -y - 2\sin x$