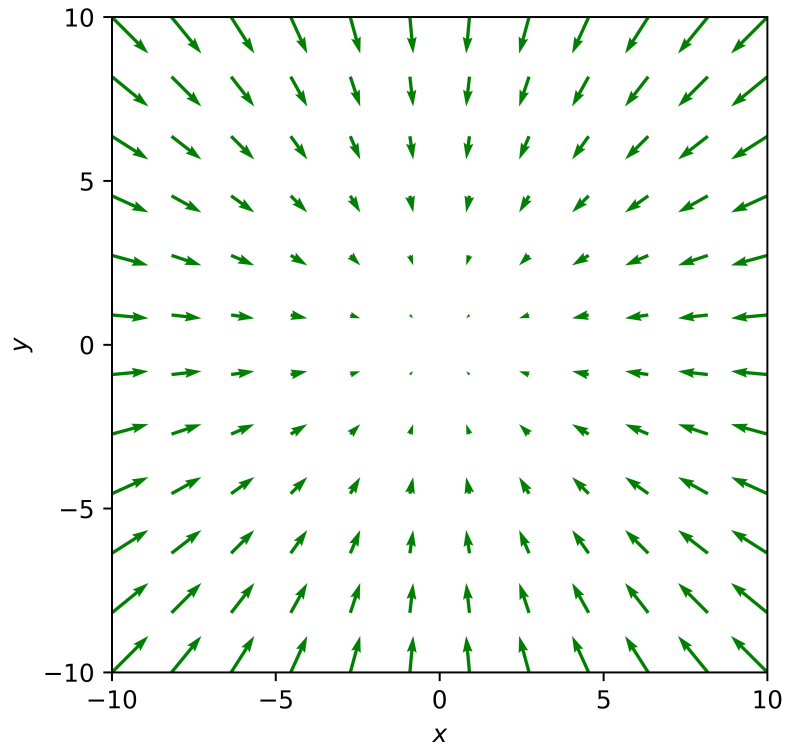
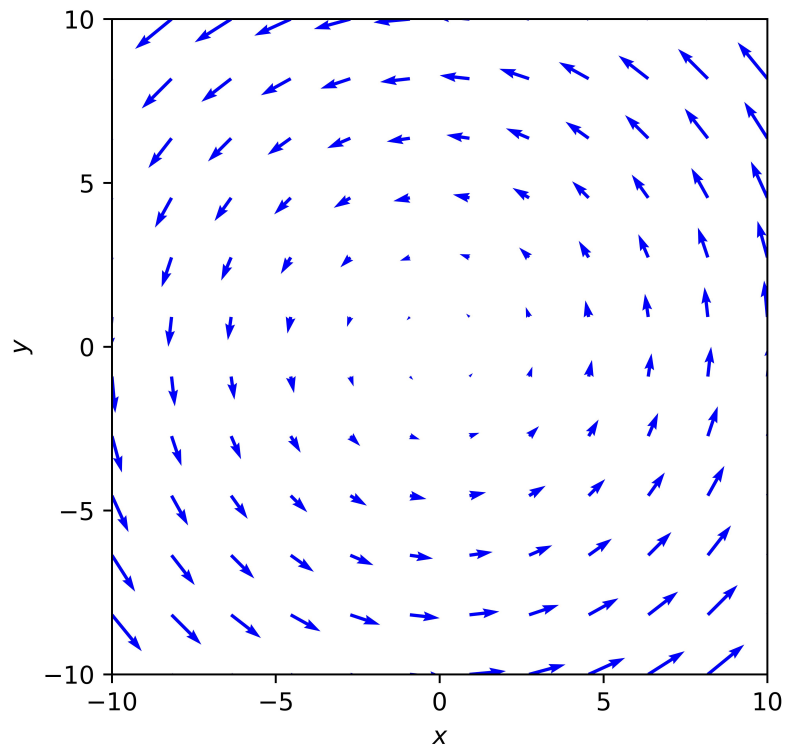


(1^{pt}) 1.



The figure above shows the electric field due to a uniform charge distribution. For example, this could be the electric field *inside* a uniformly charged sphere. Is the divergence of this vector field positive, negative, or zero? No calculations are necessary. Determine your answer by examining the vector field shown in the plot.

(1^{pt}) 2.

The figure above shows the magnetic field due to a uniformly-distributed current. For example, this could be the magnetic field *inside* a long straight wire of diameter d carrying a uniformly-distributed current. Is the curl of this vector nonzero or zero? If it is nonzero, does $\nabla \times \mathbf{B}$ point into the page or out of the page? No calculations are necessary. Determine your answer by examining the vector field shown in the plot.