F(x,y) = (x,-y) at (1,2)
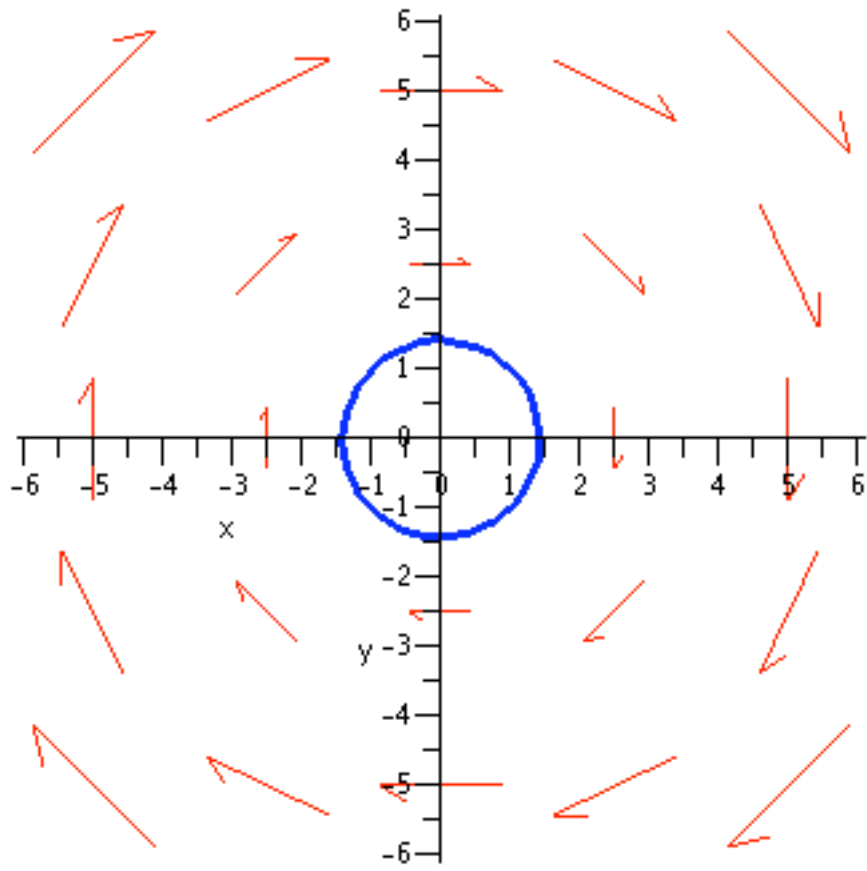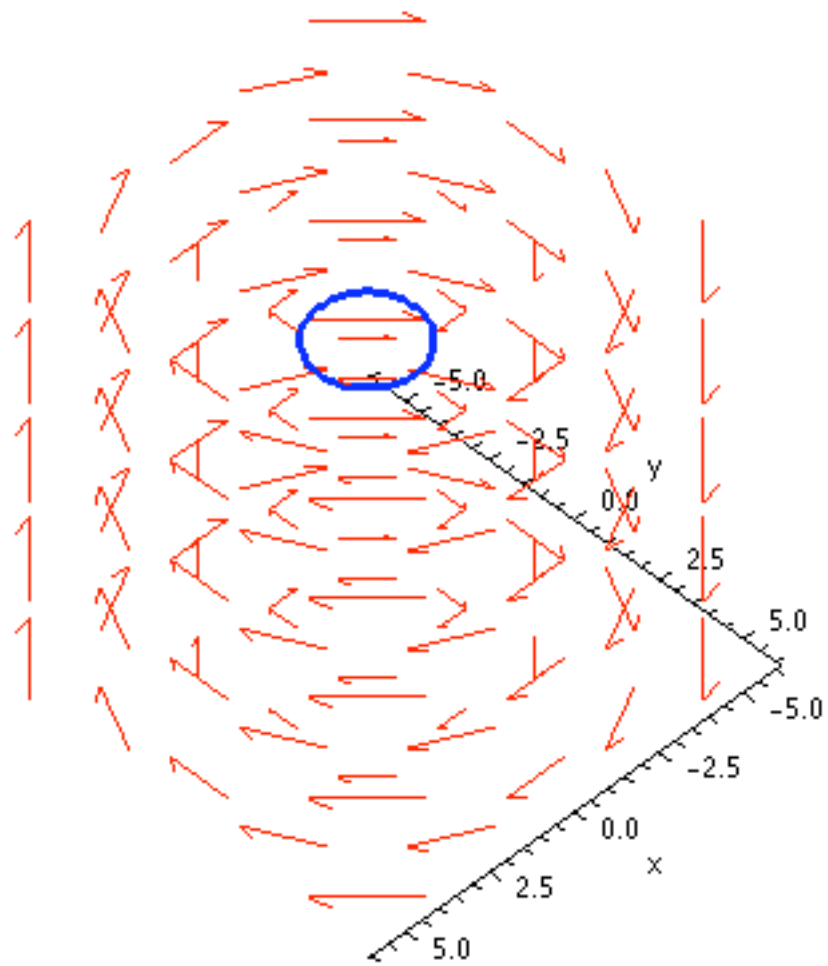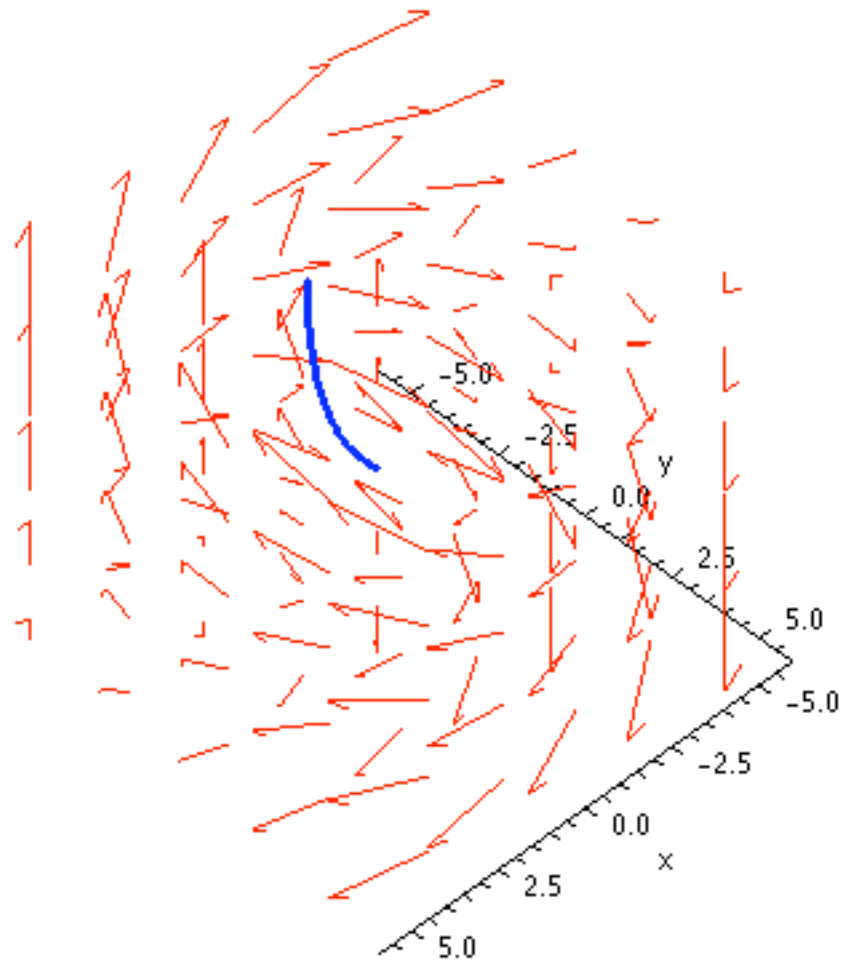
F(x,y) = (y,-x) at (1,1)

F(x,y,z) = (y, -x, 0) at (1,1,3)

F(x,y) = (y,-x,z) at (1,1,1)