Vector Fields

<< Graphics`

Example. The gravitational vector field (thanks to sir Isaac; here is a 2D–picture):

\texttt{PlotVectorField[{-x/(x^2+y^2)^{3/2}, -y/(x^2+y^2)^{3/2}}, \{x, -1, 1\}, \{y, -1, 1\}]}  

Example. The rotary vector field (gives the 2D–model the velocity flow of water around a sink):

\texttt{PlotVectorField[\{y/(x^2+y^2), -x/(x^2+y^2)\}, \{x, -1, 1\}, \{y, -1, 1\}]}
- Vector fields for some of the homework problems

\begin{verbatim}
PlotVectorField[{y, -x}, {x, -2, 2}, {y, -2, 2}, PlotLabel -> "Problem 9, p.248"]

Problem 9, p.248
\end{verbatim}

\begin{verbatim}
PlotVectorField[{x, -y}, {x, -2, 2}, {y, -2, 2}, PlotLabel -> "Problem 10, p.248"]

Problem 10, p.248
\end{verbatim}
PlotVectorField[{x, x^2}, {x, -2, 2}, {y, -2, 2}, PlotLabel -> "Problem 11, p.248"]

Problem 11, p.248