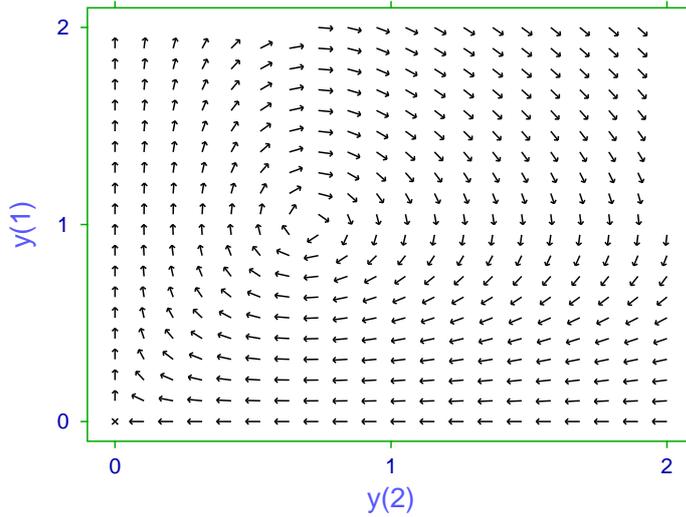




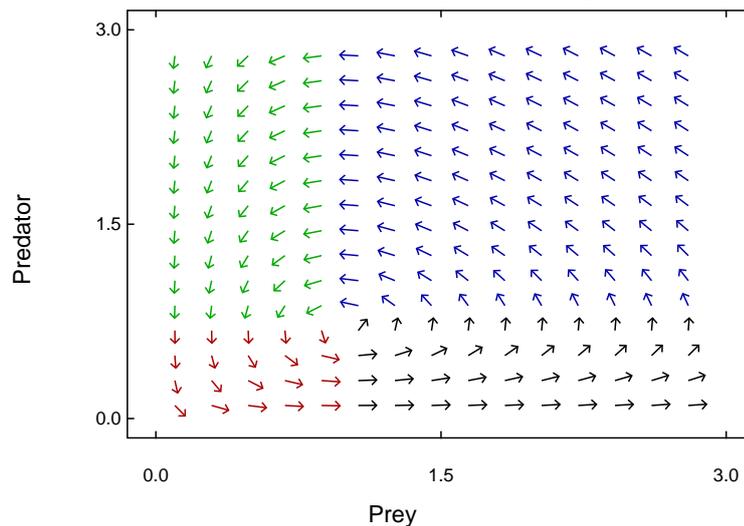
Vector field diagrams are used to indicate the strength and direction of fields as a function of position, where the definition of a field covers many situations. Consider the phase portrait technique for exploring the Lotka-Volterra predator-prey equations using program **deqsol** leading to the following diagram of vector directions.

Phase Portrait for the Lotka-Volterra Equations



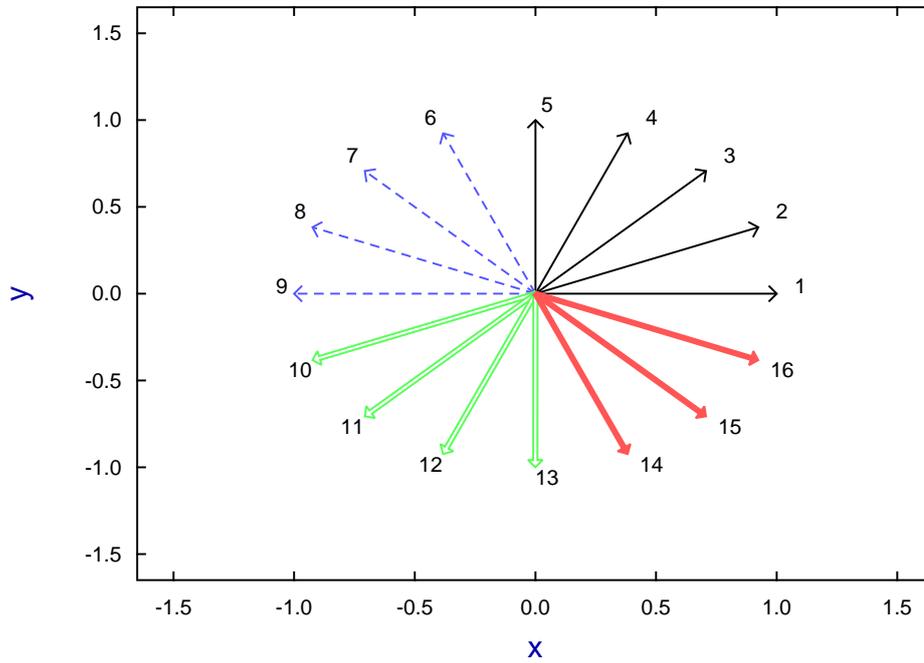
To improve the interpretation of such portraits, program **deqsol** also allows the direction of the gradients to be color-coded as in the next plot, or even to change the size of arrows to be proportional to the magnitude, although this feature has to be used sparingly.

Phase Portrait for the Lotka-Volterra Equations



SimF_{IT} does provide numerous options for creating 2D and 3D arrow diagrams as shown below, but such graphs are most easily produced using the SimD_{EM} package linked to the SimF_{IT} DLLs, which provides many extra procedures but does require programming ability

Features of 2D Arrow Diagrams



Features of 3D Arrow Diagrams

