Slope Fields

- A first order DE is a slope field, since the derivative gives the slope at each point.
- Solution is a curve tangent to the slope field.
- Initial condition is a point that the solution curve must go through.
- General solution is the family of all such curves, usually represented by enough curves so that the shape of any "in between case" is fairly clear.

Online JavaScript App from Bluffton U: (Chrome browser suggested.)

- Enter ODE, simply click in another input box to get the slope field to update.
- Change Euler to RK4 (for more accurate solution curves).
- Click in for field for solution curve OR submit specific initial value.
- To paste field image: right-click, Save image as (may choose one place and overwrite), Drag download from bottom of window into Word, Resize
  OR resize window into tight fit around graphic and input, then copy and paste window as instructed below.

DFIELD and later PPLANE Java applets for slope fields and solution curves:
http://math.rice.edu/~dfield/dfpp.html

- Download dfield.jar and click that file.
- Edit Equation, including independent and dependent variables, use * for multiplication.
- Edit Min&Max x&y
- Click "Graph Phase Plane" (a misnomer) to display the slope field
- Click initial values in the Direction (slope) Field Window and/or
  to input specific decimal initial values: Solution menu, Keyboard Input