

1) # 8, p. 8

2) # 12, p. 8

3) Consider the ODE:

$$(*) \frac{dy}{dx} = \frac{x}{y}$$

(a) Sketch the field of slopes of the equation. You can use the applet to help you.

(b) What shape of solutions does the field of slopes indicate?

(c) Solve the equation. Give the implicit and explicit form of the general solution.

(d) Sketch the general solution. (Sketch a few curves.)

4) Solve the (IVP):

$$\begin{cases} \frac{dy}{dx} = \frac{x}{y} \\ y(0) = 1 \end{cases}$$