

Discussion Questions from Section 1.2:

1. Slope fields are related to differential equations of the form $\frac{dy}{dt} = f(t, y)$. Two special cases are considered in the book. What form of differential equation is associated with each special case?
2. What special property do slope fields have in the first special case? Give an example and sketch a slope field to illustrate.
3. What special property do slope fields have in the second case? Give an example and sketch a slope field to illustrate.
4. What does *autonomous* mean for differential equations of the form $\frac{dy}{dt} = f(t, y)$? What special property do the solution curves for autonomous equations have?
5. What is meant by *equilibrium solution*? What does the graph of such a solution look like? How can such solutions be identified by examining the slope field? By examining the differential equation?