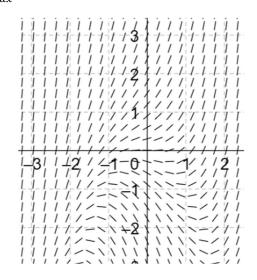
7.3 Sketching Slope Fields

CA #2

Draw a slope field for each of the following differentia in the graph. 1. $\frac{dy}{dx} = x^2 + y$ $\begin{array}{c} & & 2 \\ & & 1 \\ & & -2 \\ & & 1 \\ & & -2 \end{array}$ Match the differential equation with its slope field.	Il equations. Use each of the coordinate points shown 2. $\frac{dy}{dx} = \frac{x}{y^2}$ • • 2 • • 1 • • -1 • • -1 • • -1 • • -2 • • • 1 • • -1 • • -2 • • • 1 • • -2 • • • -1 • • -2 • • • -1 • • • -2 • • • • -2 • • • • • • -2 • • • • • • • • -2 • • • • • • • • • • • • • • • • • • •
1. $\frac{dy}{dx} = x^2 + y$ $\begin{array}{cccc} & & 2 \\ & & & 1 \\ & & & 1 \\ & & & -2 \end{array}$ Match the differential equation with its slope field.	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
$\begin{array}{c} \cdot & \cdot & 2 \\ \cdot & \cdot & 2 \\ \cdot & \cdot & 1 \\ \hline \\ -2 & -1 \\ \cdot & -2 \\ \end{array}$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
-2 -1 1 2 • -1 • • • -2 • • Match the differential equation with its slope field.	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
Match the differential equation with its slope field.	• • -2 • •
3.	$(\Lambda) \frac{dy}{dx} = x + y$
$ \begin{array}{c} 25 \\ 25 \\ 15 \\ 15 \\ 15 \\ 15 \\ 15 \\ 15 \\$	(A) $\frac{dy}{dx} = x + y$ (B) $\frac{dy}{dx} = \frac{x}{y}$
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	(C) $\frac{dy}{dx} = \frac{y}{x}$ (D) $\frac{dy}{dx} = (x - 1)y$ (E) $\frac{dy}{dx} = x(y - 1)$
4	(A) $\frac{dy}{dx} = y - x$
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	(B) $\frac{dy}{dx} = -\frac{x}{y}$ (C) $\frac{dy}{dx} = -\frac{y}{x}$
$\begin{array}{c} -15 \\ -15 \\ -25 \\ -15 \\$	(D) $\frac{dy}{dx} = y(x-1)$ (E) $\frac{dy}{dx} = x(y-1)$

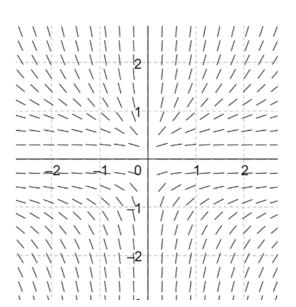
5. The figure below shows the slope field for the differential equation $\frac{dy}{dx} = x^2 + y$

Let *f* be the function that satisfies the given differential equation. Write an equation for the tangent line to the curve y = f(x) through the point (-1, -2).



6. The figure below shows the slope field for the differential equation $\frac{dy}{dx} = \frac{y^2}{x}$

Let *f* be the function that satisfies the given differential equation. Write an equation for the tangent line to the curve y = f(x) through the point (2, -1).



Answers to 7.3 CA #2

1.	$\begin{array}{c} 2. \\ \hline & 2 \\ \hline & 2 \\ \hline & 2 \\ \hline & 1 \\ \hline \hline & 1 \\ \hline \hline \hline & 1 \\ \hline \hline \hline \hline & 1 \\ \hline \hline$	3. B	4. A
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	5. $y + 2 = -(x + 1)$	6. $y+1 = \frac{1}{2}(x-2)$	