AP Calc AB
Slopefield Worksheet

Name Key

Match each slopefield with the differential equations below. All windows are $[-3.2,3.2]_x$ $[-3.2,3.2]_y$

D 1) $\frac{dy}{dx} = 2x+2$

H 2) $\frac{dy}{dx} = x-y$

A 3) $\frac{dy}{dx} = y$

F 4) $\frac{dy}{dx} = \cos(x)$

J 5) $\frac{dy}{dx} = \ln|x-1|$

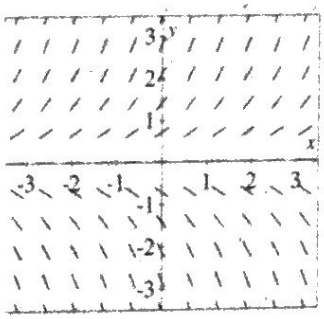
G 6) $\frac{dy}{dx} = \frac{1}{x^{(2/3)}}$

E 7) $\frac{dy}{dx} = \frac{x}{x-2}$

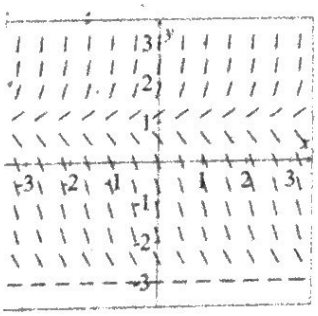
B 8) $\frac{dy}{dx} = (y-1)(y+3)$

C 9) $\frac{dy}{dx} = x^{\left(\frac{-1}{3}\right)}$

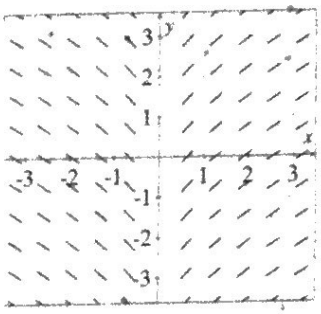
A)



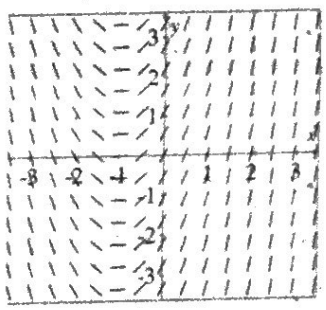
B)



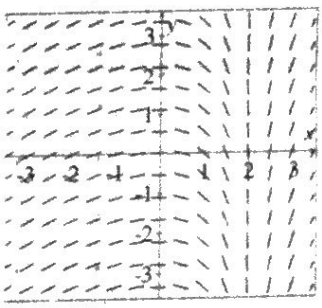
C)



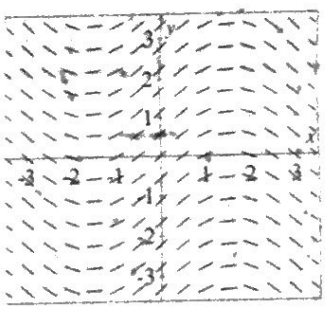
D)



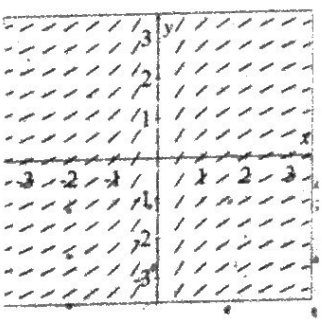
E)



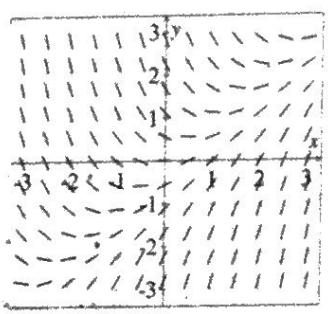
F)



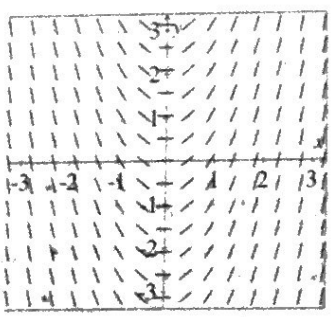
G)



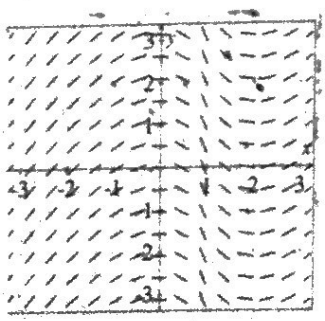
H)



I)

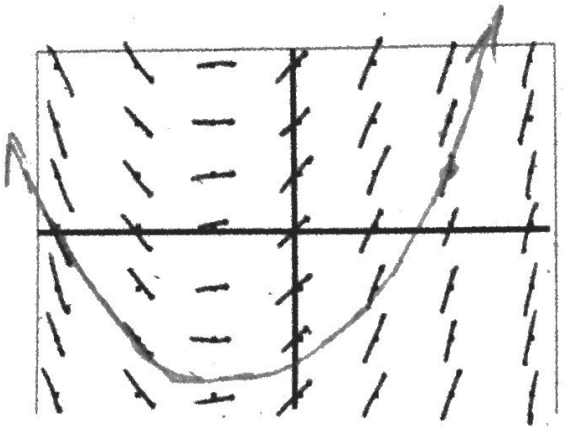


J)

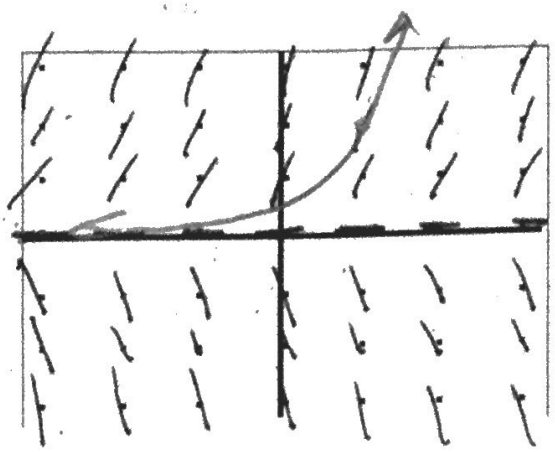


For the following differential equations, sketch a slope field. Then use the initial condition to sketch in the solution curve.

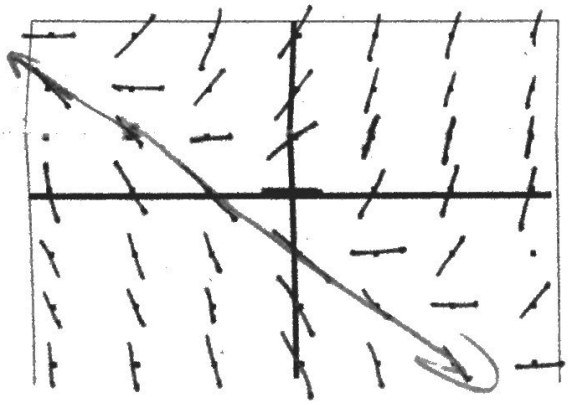
1. $\frac{dy}{dx} = x + 1, \quad f(2) = 1$



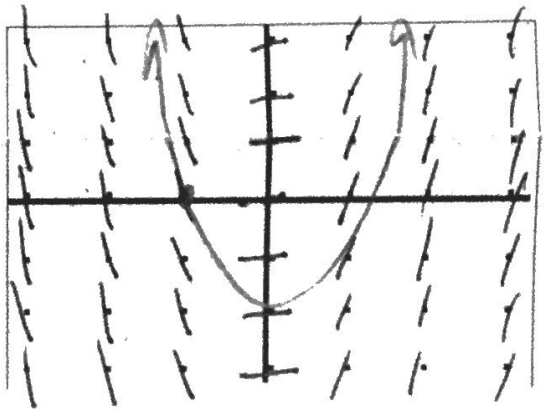
2. $\frac{dy}{dx} = 2y, \quad f(1) = 2$



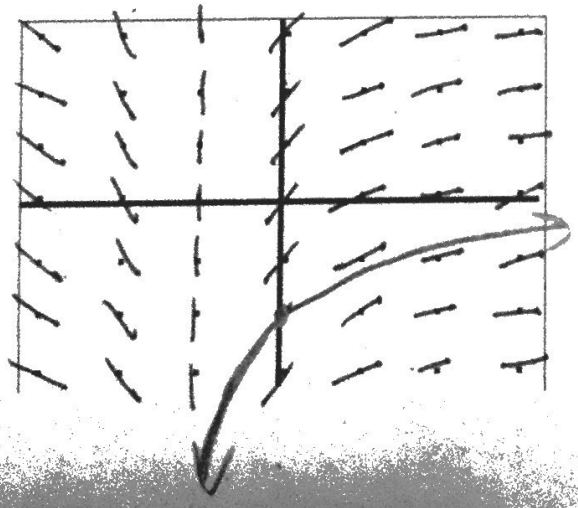
3. $\frac{dy}{dx} = x + y, \quad f(-2) = 1$



4. $\frac{dy}{dx} = 2x, \quad f(-1) = 0$



5. $\frac{dy}{dx} = \frac{1}{1+x}, \quad f(0) = -2$



6. $\frac{dy}{dx} = -\frac{y}{x}, \quad f(3) = 1$