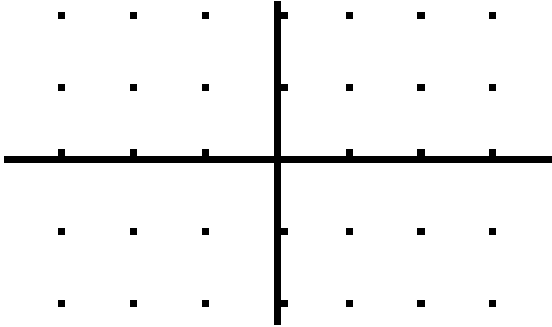


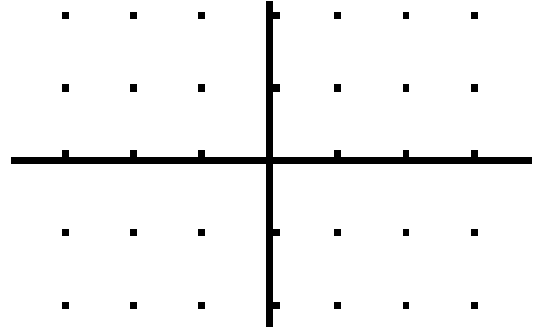
**SLOPE FIELDS**  
**Assignment 6.2**

Draw a slope field for each of the following differential equations.

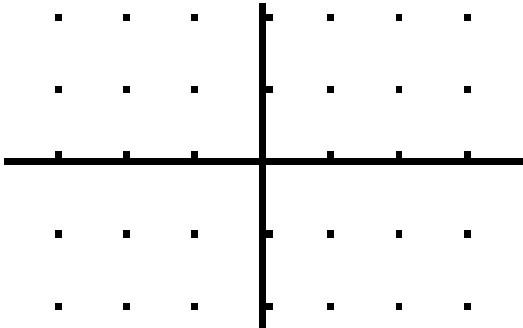
1.  $\frac{dy}{dx} = x + 1$



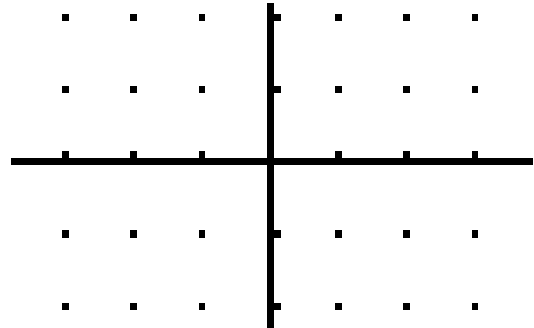
2.  $\frac{dy}{dx} = 2y$



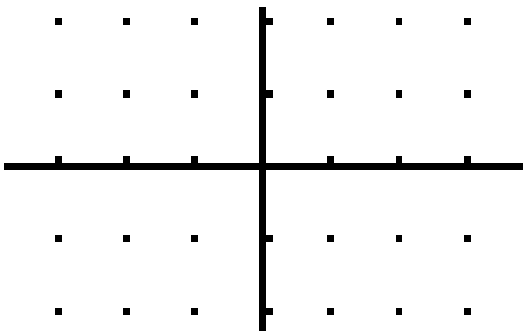
3.  $\frac{dy}{dx} = x + y$



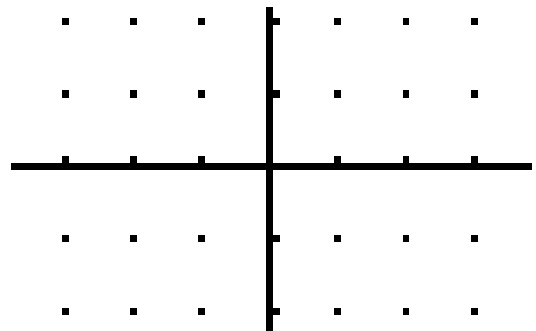
4.  $\frac{dy}{dx} = 2x$



5.  $\frac{dy}{dx} = y - 1$

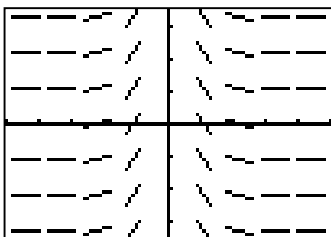


6.  $\frac{dy}{dx} = -\frac{y}{x}$

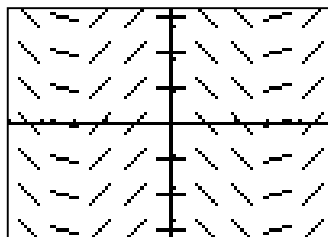


Match each slope field with the equation that the slope field could represent.

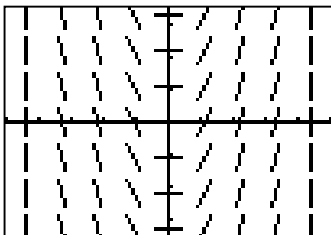
(A)



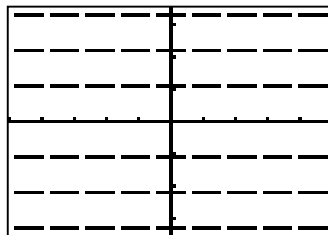
(B)



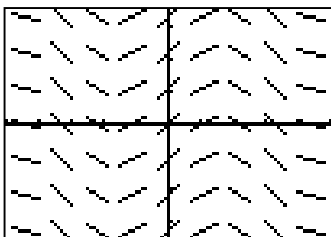
(C)



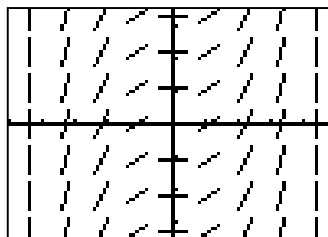
(D)



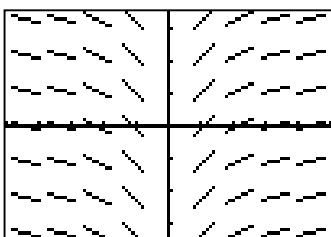
(E)



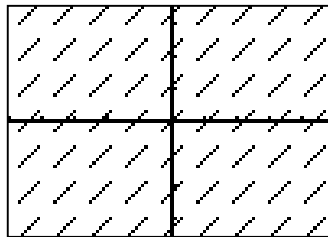
(F)



(G)



(H)



7.  $y = 1$

11.  $y = \frac{1}{x^2}$

8.  $y = x$

12.  $y = \sin x$

9.  $y = x^2$

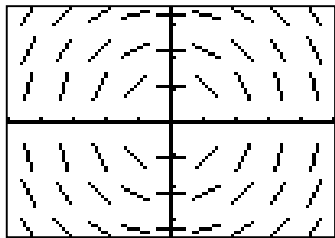
13.  $y = \cos x$

10.  $y = \frac{1}{6}x^3$

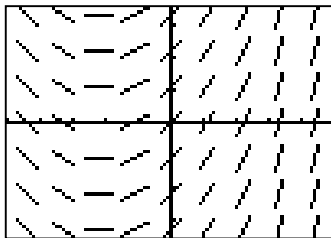
14.  $y = \ln|x|$

Match the slope fields with their differential equations.

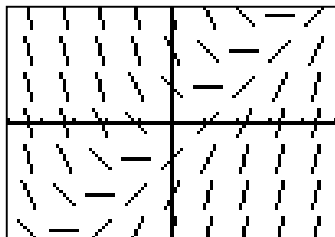
(A)



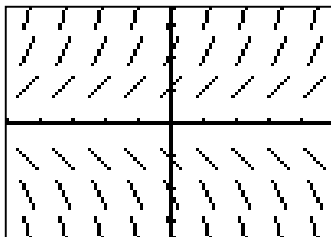
(B)



(C)



(D)



15.  $\frac{dy}{dx} = \frac{1}{2}x + 1$

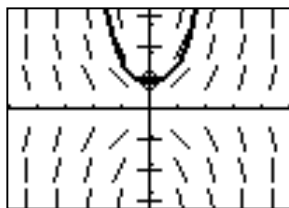
17.  $\frac{dy}{dx} = x - y$

16.  $\frac{dy}{dx} = y$

18.  $\frac{dy}{dx} = -\frac{x}{y}$

19. The calculator drawn slope field for the differential equation  $\frac{dy}{dx} = xy$  is shown in the figure below. The solution curve passing through the point  $(0, 1)$  is also shown.

- (a) Sketch the solution curve through the point  $(0, 2)$ .
- (b) Sketch the solution curve through the point  $(0, -1)$ .



20. The calculator drawn slope field for the differential equation  $\frac{dy}{dx} = x + y$  is shown in the figure below.

- (a) Sketch the solution curve through the point  $(0, 1)$ .
- (b) Sketch the solution curve through the point  $(-3, 0)$ .

