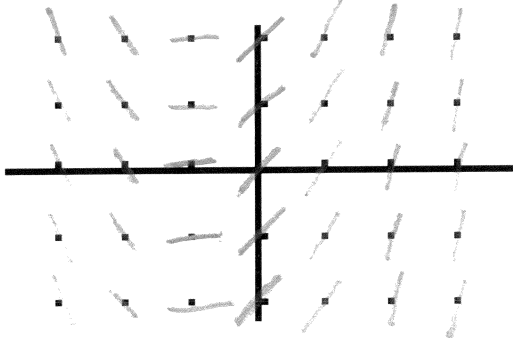


#1-18

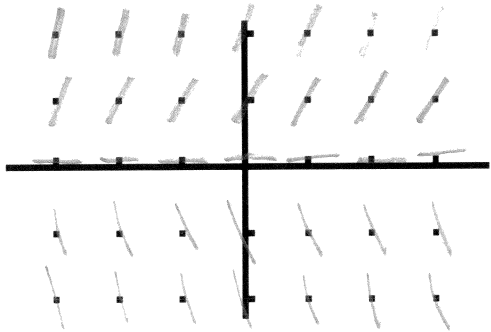
# SLOPE FIELDS

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

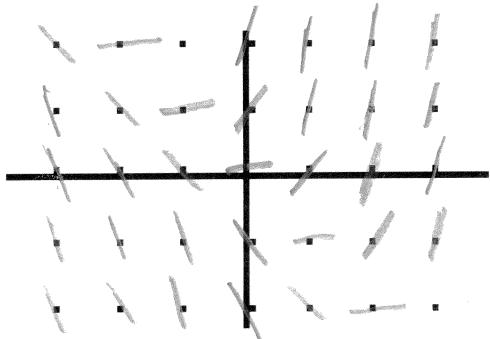
1.  $\frac{dy}{dx} = x+1$



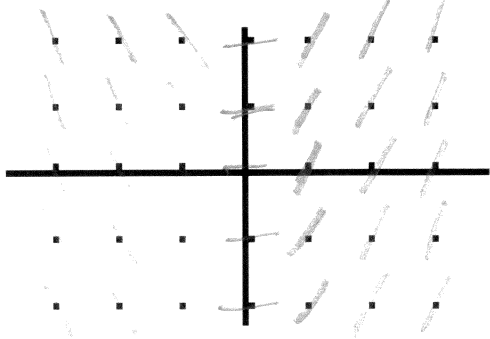
2.  $\frac{dy}{dx} = 2y$



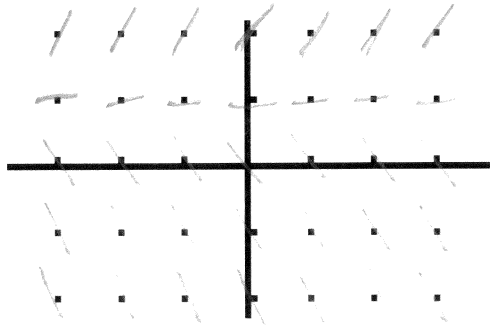
3.  $\frac{dy}{dx} = x+y$



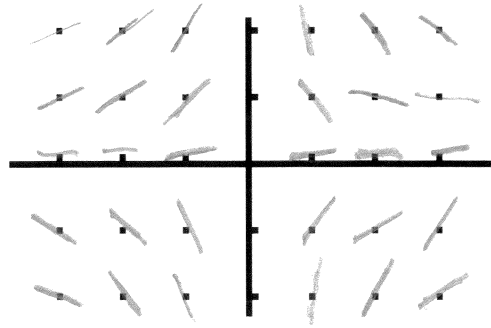
4.  $\frac{dy}{dx} = 2x$



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

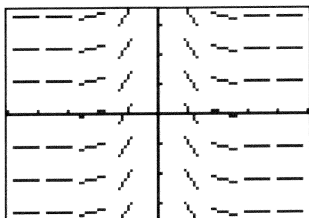


6.  $\frac{dy}{dx} = -\frac{y}{x}$

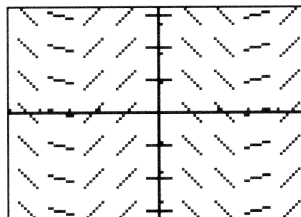


Match each slope field with the equation that the slope field could represent.

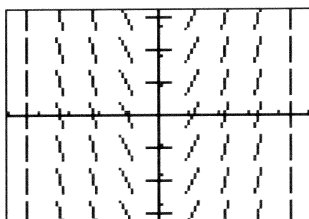
(A)



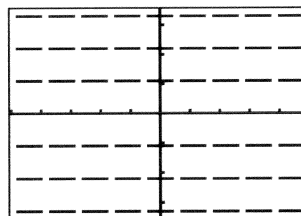
(B)



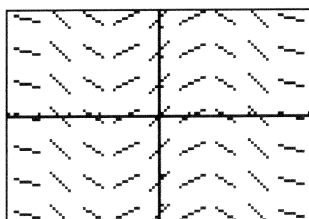
(C)



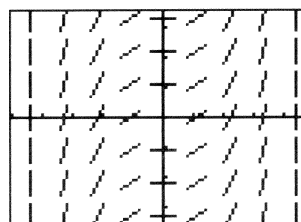
(D)



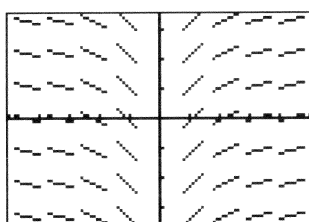
(E)



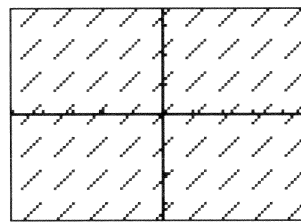
(F)



(G)



(H)



7.  $y = 1$  d

8.  $y = x$  h

9.  $y = x^2$  c

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

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

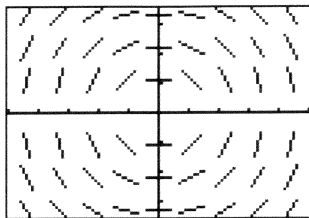
12.  $y = \sin x$  e

13.  $y = \cos x$  b

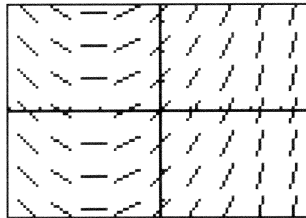
14.  $y = \ln|x|$  g

Match the slope fields with their differential equations.

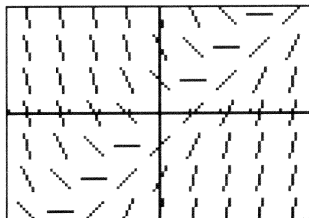
(A)



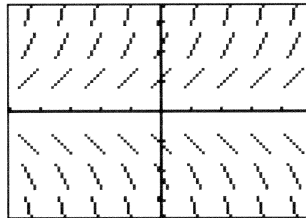
(B)



(C)



(D)



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

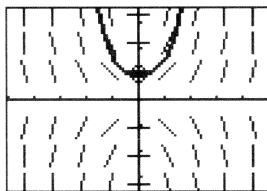
17.  $\frac{dy}{dx} = x - y$  *c*

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

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

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  $(-3, 0)$ .

