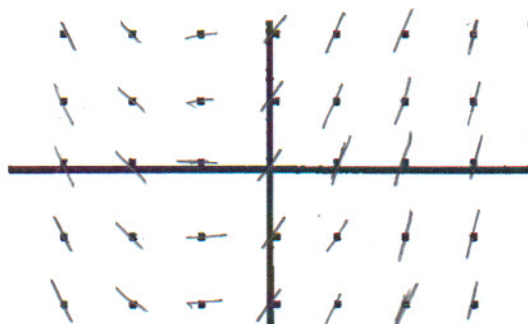


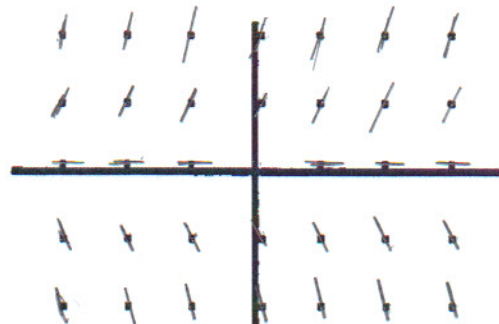
SLOPE FIELDS

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

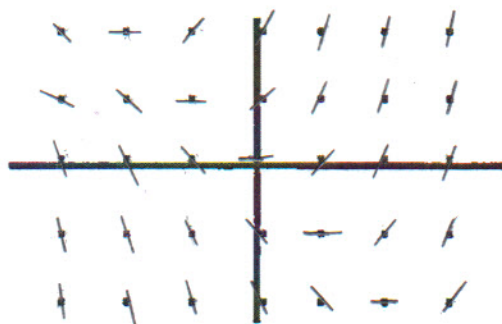
1. $\frac{dy}{dx} = x + 1$



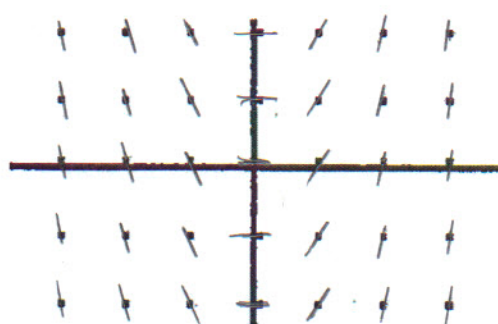
2. $\frac{dy}{dx} = 2y$



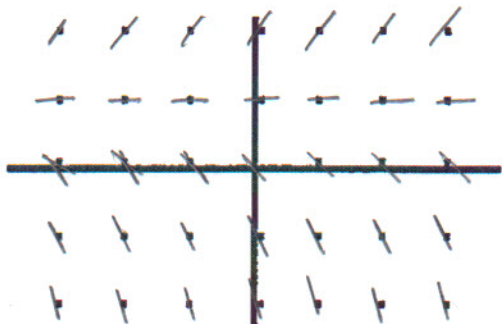
3. $\frac{dy}{dx} = x + y$



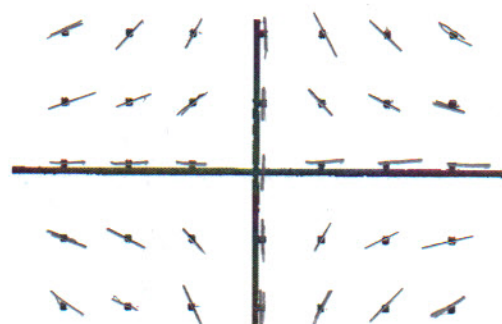
4. $\frac{dy}{dx} = 2x$



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

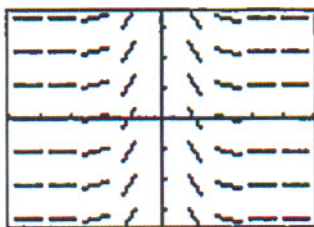


6. $\frac{dy}{dx} = -\frac{y}{x}$

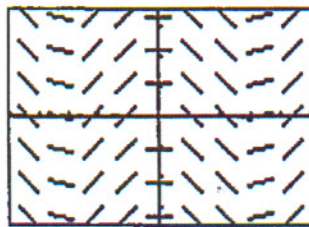


Match each slope field with the equation that the slope field could represent.

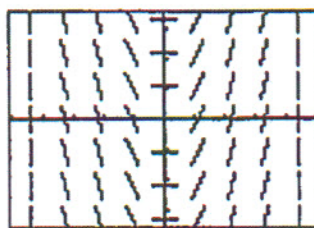
(A)



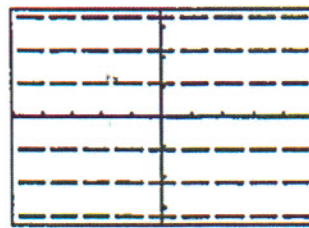
(B)



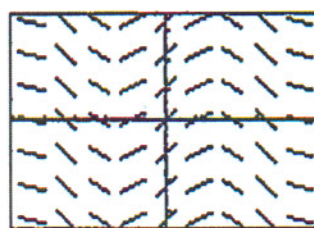
(C)



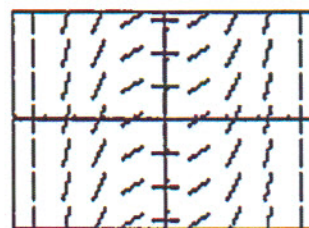
(D)



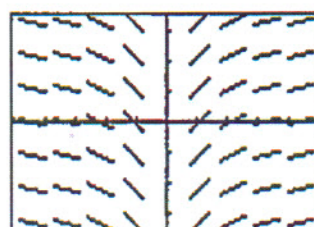
(E)



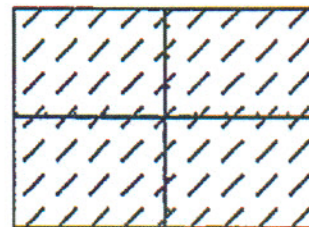
(F)



(G)



(H)



7. $y = 1$ D
 $y' = 0$

8. $y = x$ H
 $y' = 1$

9. $y = x^2$ C
 $y' = 2x$

10. $y = \frac{1}{6}x^3$ F
 $y' = \frac{1}{2}x^2$

11. $y = \frac{1}{x^2}$ A
 $y' = -\frac{1}{x^3}$

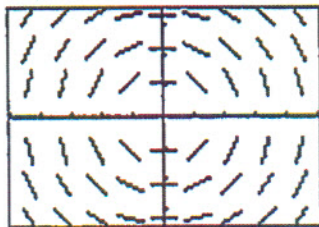
12. $y = \sin x$ E
 $y' = \cos x$

13. $y = \cos x$ B
 $y' = -\sin x$

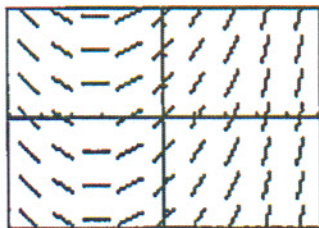
14. $y = \ln|x|$ G
 $y' = \frac{1}{x}$

Match the slope fields with their differential equations.

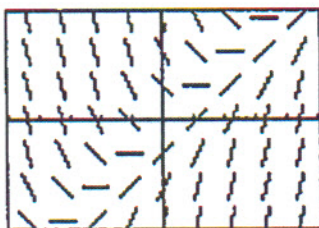
(A)



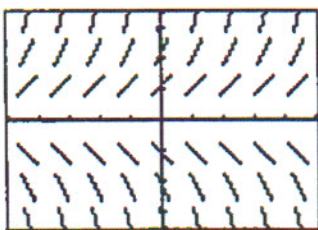
(B)



(C)



(D)



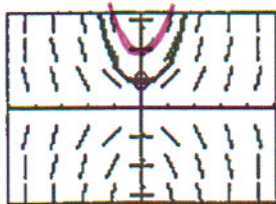
15. $\frac{dy}{dx} = \frac{1}{2}x + 1$ B

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 $(-3, 0)$.

