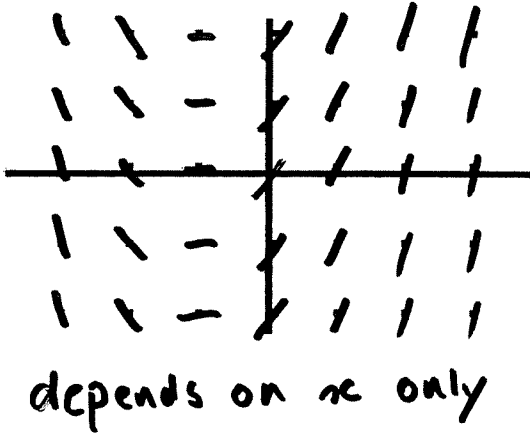


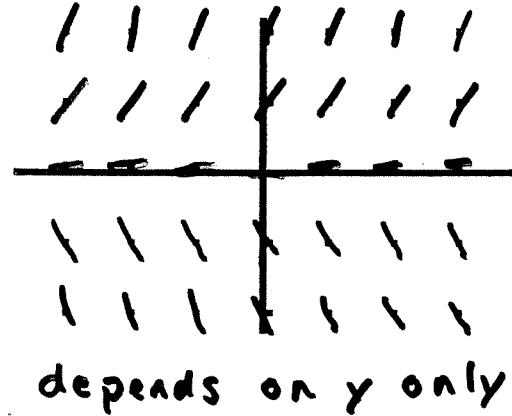
SLOPE FIELDS

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

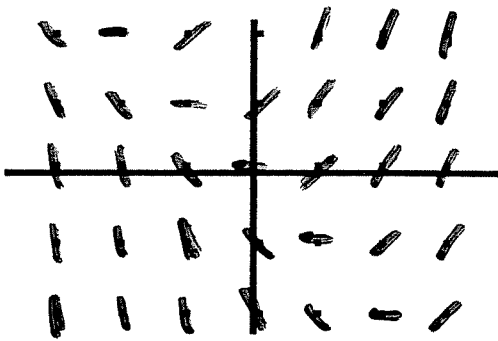
1. $\frac{dy}{dx} = x + 1$



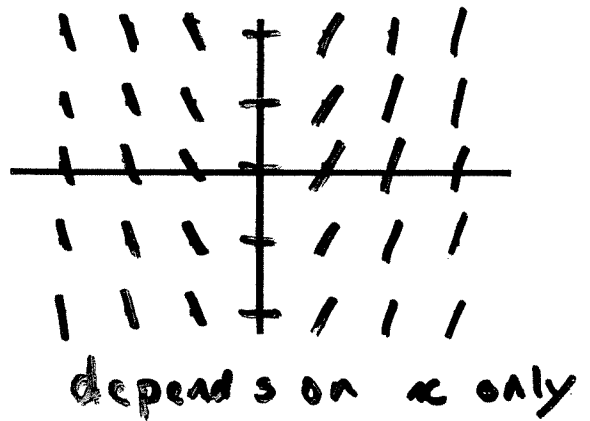
2. $\frac{dy}{dx} = 2y$



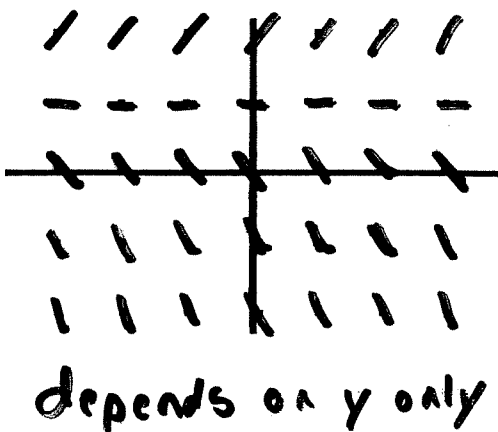
3. $\frac{dy}{dx} = x + y$



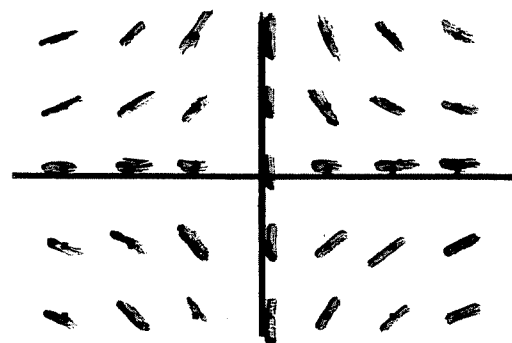
4. $\frac{dy}{dx} = 2x$



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

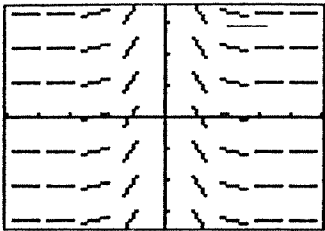


6. $\frac{dy}{dx} = -\frac{y}{x}$

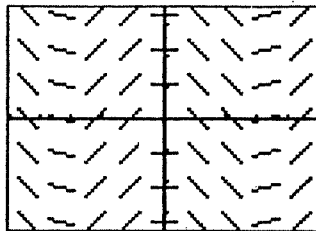


Match each slope field with the equation that the slope field could represent.

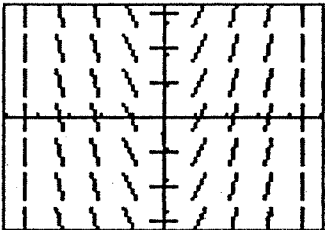
(A)



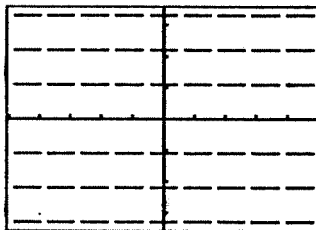
(B)



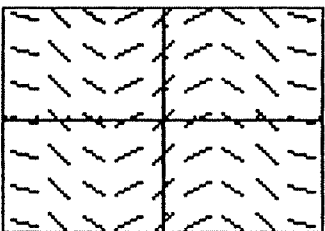
(C)



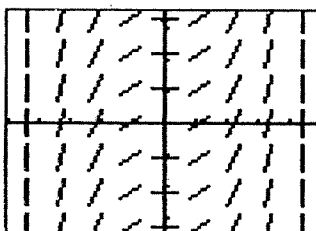
(D)



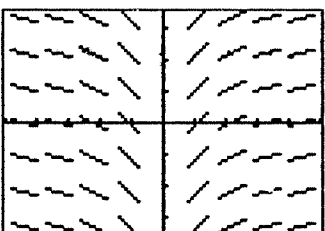
(E)



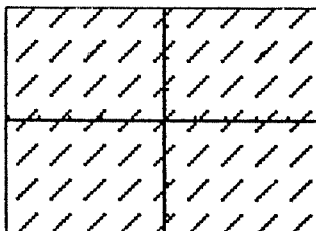
(F)



(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**

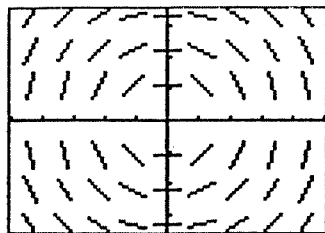
12. $y = \sin x$ **e**

13. $y = \cos x$ **b**

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

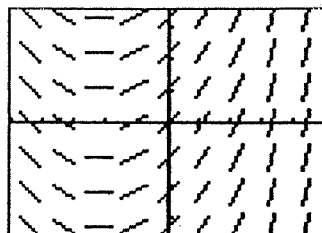
Match the slope fields with their differential equations.

(A)



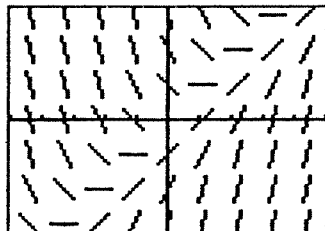
Q I + III
M ⊕
Q II + IV
M ⊖

(B)



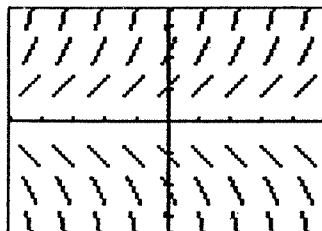
depends
on y
only

(C)



$m = 1$
when
 x is one
more than
 y

(D)



depends on
 x only

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

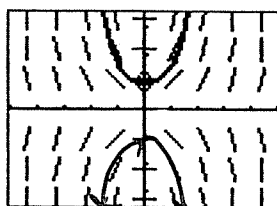
17. $\frac{dy}{dx} = x - y$ **c**

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 $(-3, 0)$. ●

slant asymptote

