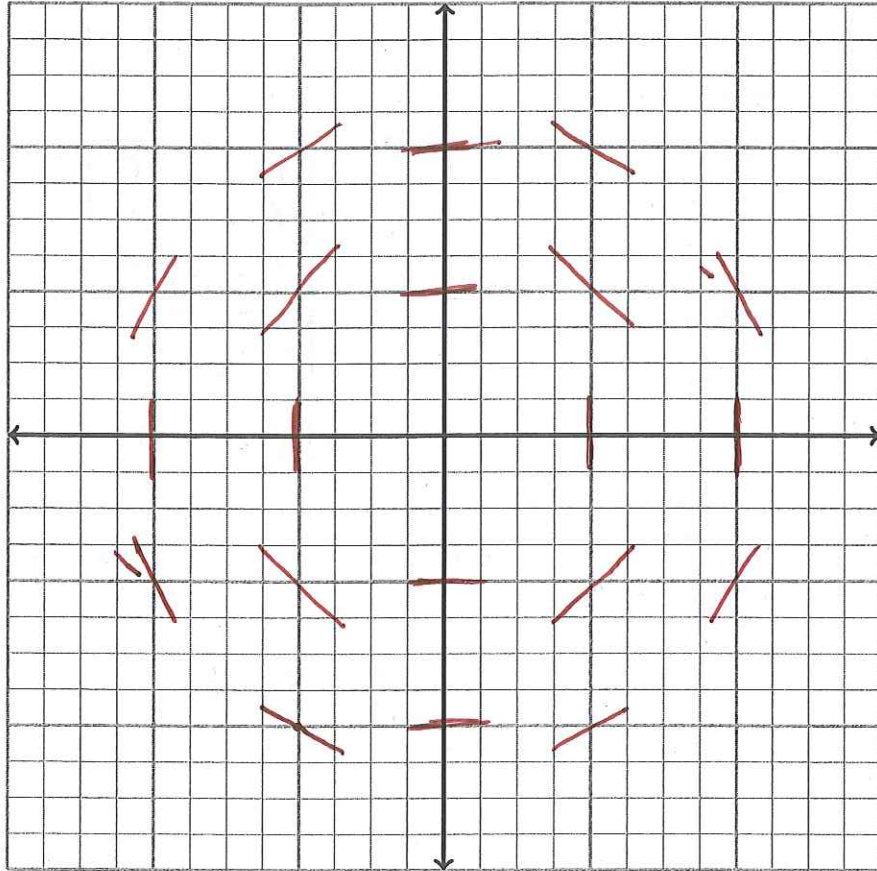


Slope Fields

February 8, 2014

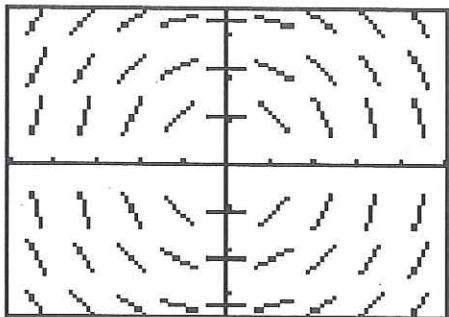
Draw the slope field for the differential equation $\frac{dy}{dx} = -\frac{x}{y}$.



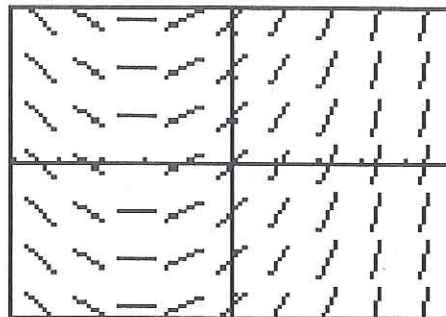
x	y	$\frac{dy}{dx} = -\frac{x}{y}$
0	1	0
0	-1	0
1	1	-1
1	-1	1
-1	1	1
-1	-1	-1
2	1	-2
1	2	-1/2
-2	0	undefined (∞)

Match the slope fields with their differential equations.

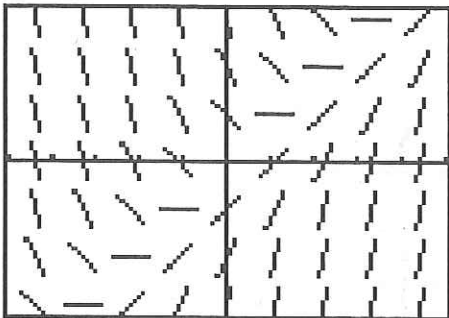
(A)



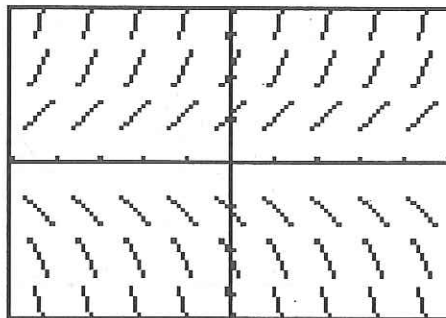
(B)



(C)



(D)



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

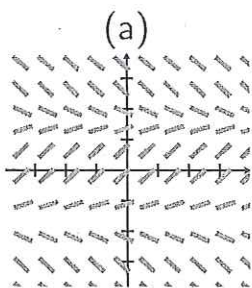
16. $\frac{dy}{dx} = x - y$ **C**

17. $\frac{dy}{dx} = y$ **B**

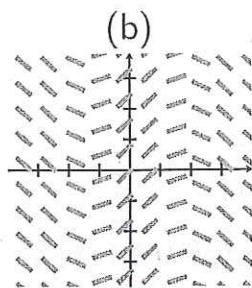
18. $\frac{dy}{dx} = -\frac{x}{y}$ **A**

(1) Match the differential equations to the slope fields:

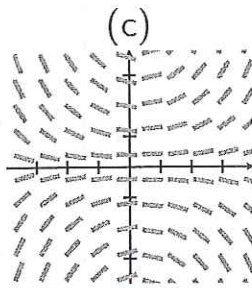
(A) $\frac{dy}{dx} = \frac{1}{5}xy$ (B) $\frac{dy}{dx} = x + y$ (C) $\frac{dy}{dx} = \cos(x)$ (D) $\frac{dy}{dx} = \cos(y)$



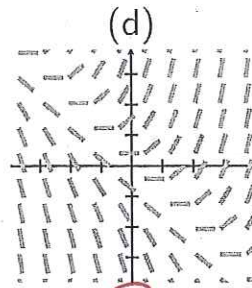
D



C



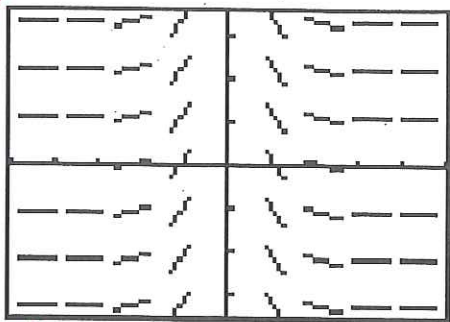
A



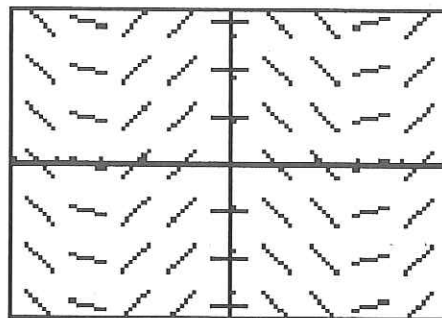
B

For 7 – 14, match each slope field with the **equation** that the slope field could represent.

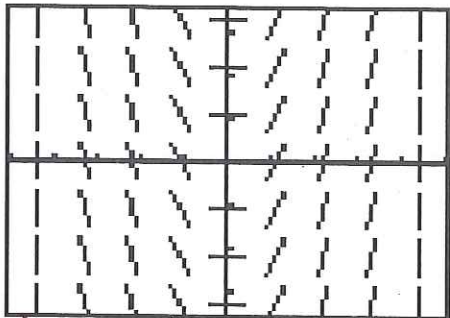
~~(A)~~



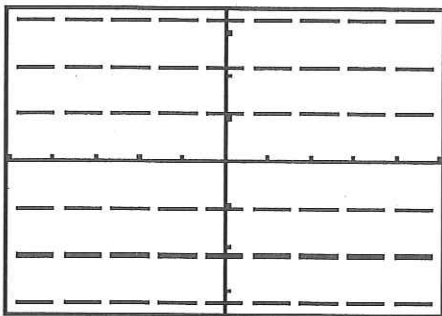
~~(B)~~



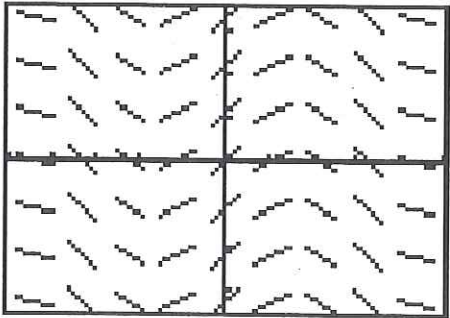
~~(C)~~



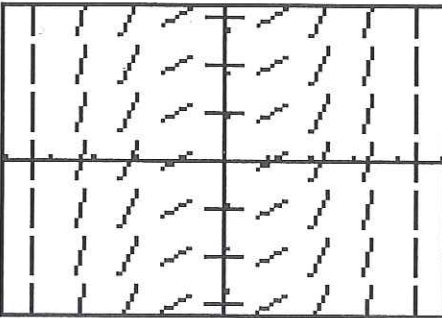
~~(D)~~



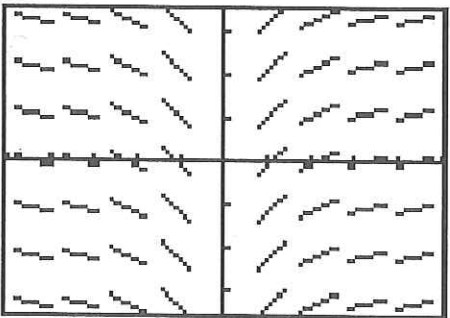
~~(E)~~



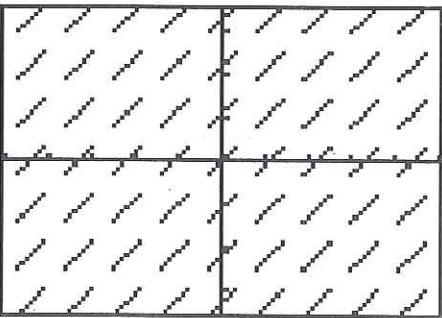
~~(F)~~



~~(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**