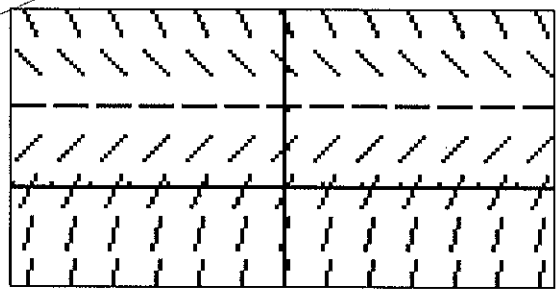
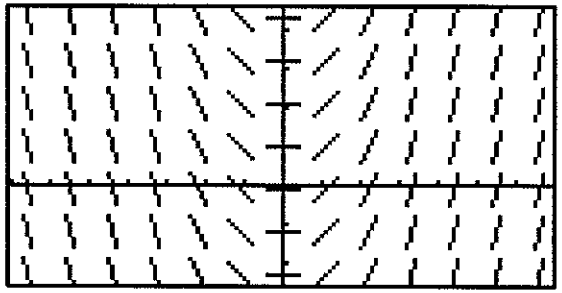
Match the slope fields with their differential equations.

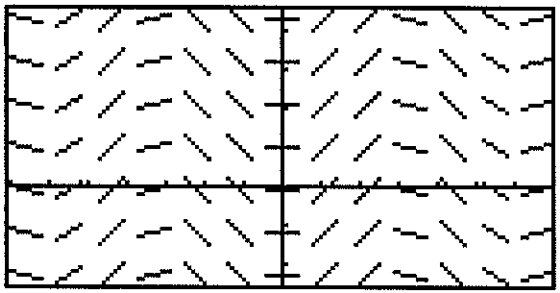
(A) 9



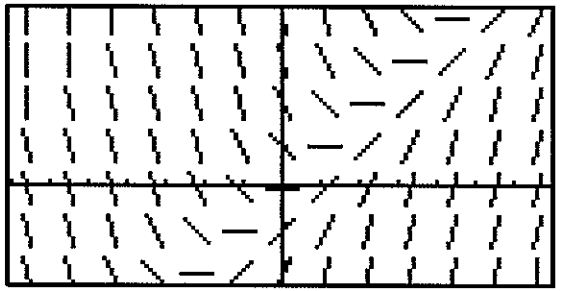
(B) 10



(C) 7



(D) 8



7. $\frac{dy}{dx} = \sin x$ C

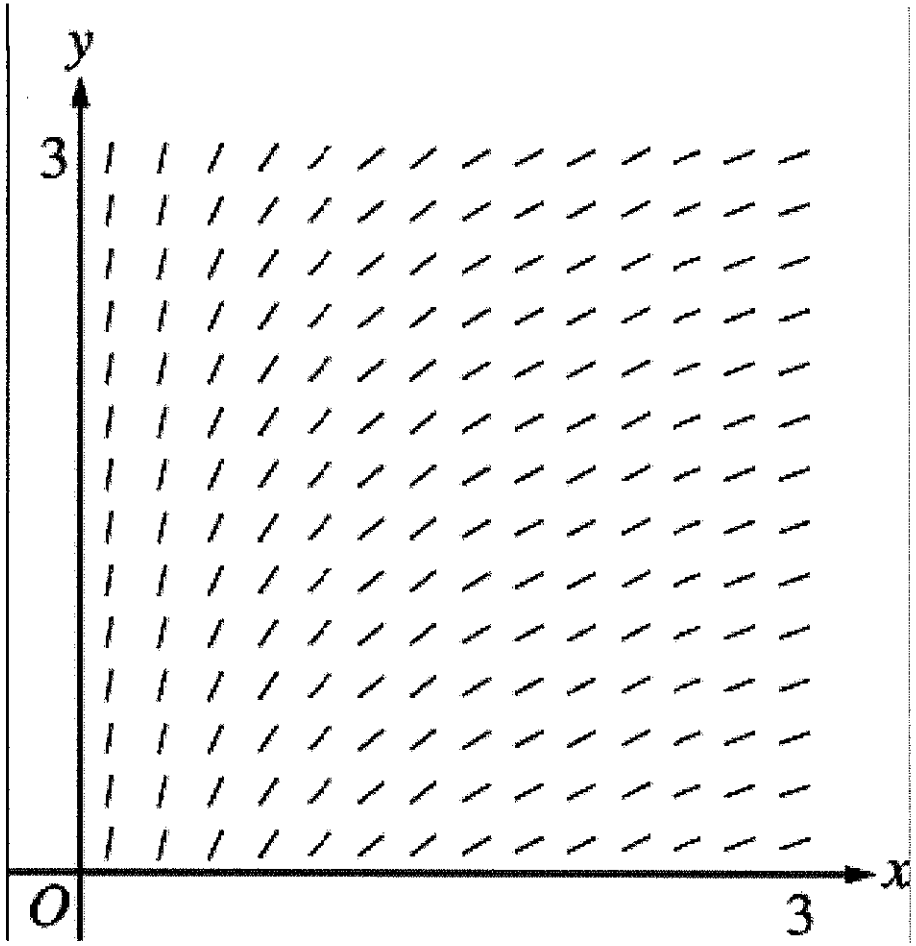
8. $\frac{dy}{dx} = x - y$ D

9. $\frac{dy}{dx} = 2 - y$ A

10. $\frac{dy}{dx} = x$ B

From the May 2008 *AP Calculus Course Description:*
15.

From: http://apcentral.collegeboard.com/apc/public/repository/ap08_calculus_slopefields_worksheet.pdf



$y = \ln x$

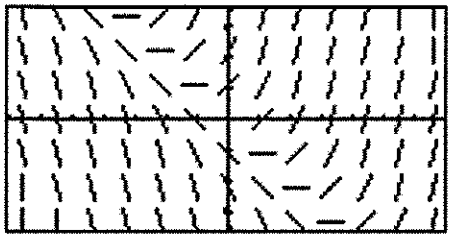
(A) $y = x^2$ (B) $y = e^x$ (C) $y = e^{-x}$ (D) $y = \cos x$ (E) $y = \ln x$

The slope field from a certain differential equation is shown above. Which of the following could a specific solution to that differential equation?

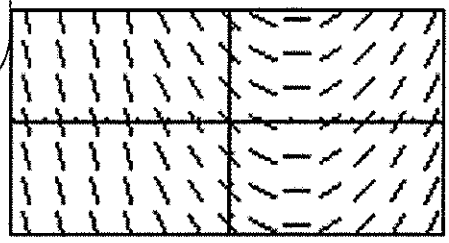
(A) $y = x^2$ (B) $y = e^x$ (C) $y = e^{-x}$ (D) $y = \cos x$ (E) $y = \ln x$

Match the slope fields with their differential equations.

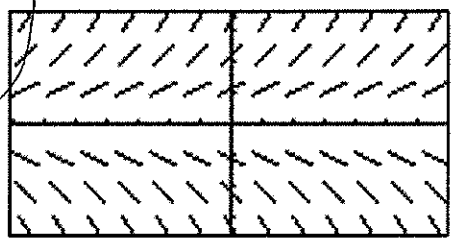
(A) 14. $y' = x+y$



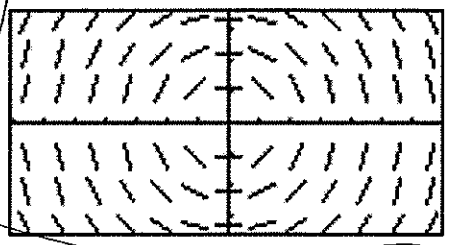
(B) 11



(C) 12



(D) 13



11. $\frac{dy}{dx} = 0.5x - 1$ B

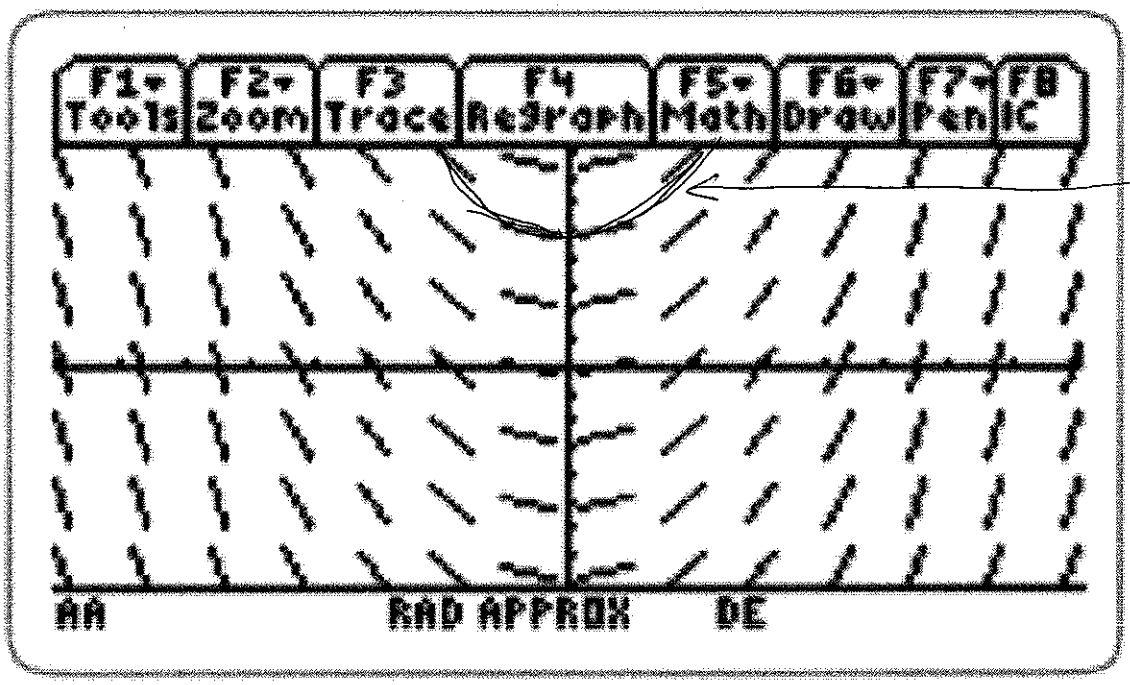
12. $\frac{dy}{dx} = 0.5y$ C

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

A 14. $\frac{dy}{dx} = x+y$

http://apcentral.collegeboard.com/apc/public/repository/ap08_calculus_slopefields_worksh

7. Which of the following could be a solution of the differential equation with the given slope field?



(A) $y = x + 1$

(B) $y = x^2 + 2$

(C) $y = x^3 - 2$

(D) $y = \ln(x + 1)$

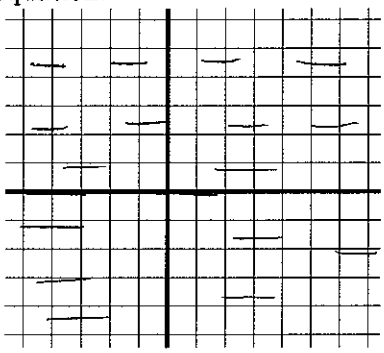
(E) $y = 2e^x$

www.amscopub.com/%5Cimages%5Cfile%5CFile_8.

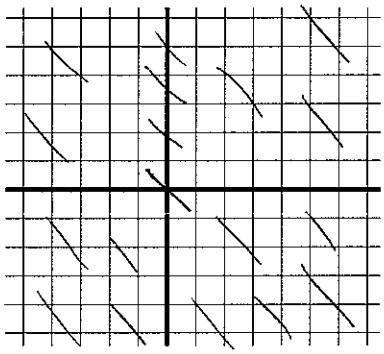
8.1 supplemental HW

1.) For each of the following differential equations (i) draw its direction field; (ii) sketch the solution of the direction field that passes through the point (-2, 1); (iii) state the general solution to the differential equation.

a.) $y' = 0$



b.) $y' = -1$



2.) Circle a solution to the differential equation whose direction field is given below:

A) $y = t^2$

B) $y = \frac{1}{2}t + 1$

C) $y = e^t$

D) $y = t + 1$

E) $y = -2e^t$

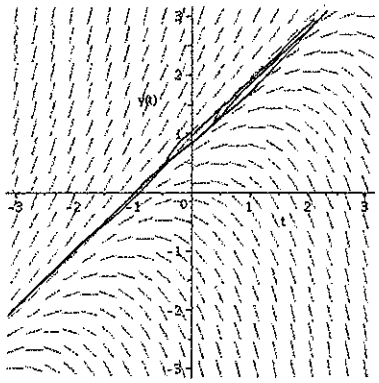
F) $y = 2t + 1$

G) $y = ln(t)$

H) $y = 0$

I) $y = sin(t)$

J) $y = cos(t)$



3.) Circle the differential equation whose direction field is given below:

A) $y' = t^2$

B) $y' = \frac{1}{2}t + 1$

C) $y' = e^t$

D) $y' = t + 1$

E) $y' = -2e^t$

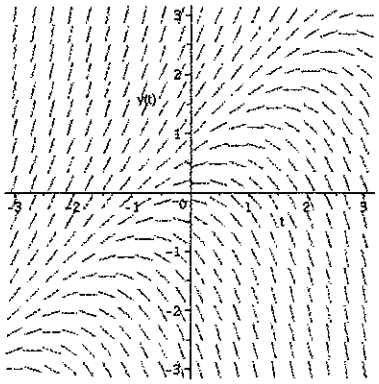
F) $y' = y - t$

G) $y' = ln(t)$

H) $y' = 0$

I) $y' = sin(t)$

J) $y' = cos(t)$



4.) Circle the general solution to the differential equation whose direction field is given below:

A) $y = t + C$

B) $y = t^2 + C$

C) $y = e^t + C$

D) $y = Ce^t + t + 1$

E) $y = Ce^t$

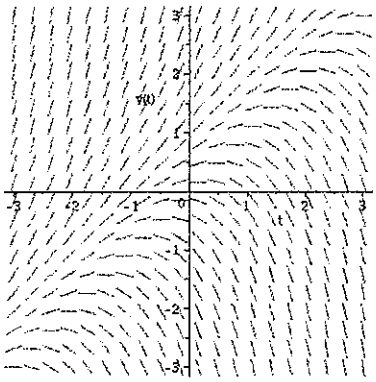
F) $y = e^t + t + C$

G) $y = ln(t) + C$

H) $y = C$

I) $y = sin(t) + C$

J) $y = cos(t) + C$



5.) Which of the following could be the general solution to the differential equation whose direction field is given below:

A) $y = t + C$

B) $y = t^2 + C$

C) $y = e^t + C$

D) $y = \frac{(t-1)^3}{3} + C$

E) $y = Ce^t$

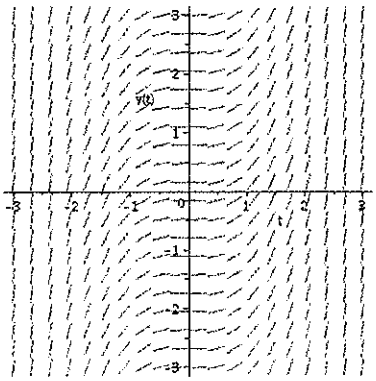
F) $y = \frac{t^3}{3} + C$

G) $y = ln(t) + C$

H) $y = C$

I) $y = \frac{Ct^3}{3}$

J) $y = \frac{C(t-1)^3}{3}$



6.) Circle the differential equation whose direction field is given below:

A) $y' = t^2$

B) $y' = y + 3$

C) $y' = e^t$

D) $y' = t + 1$

E) $y' = t - y$

F) $y' = y - t$

G) $y' = (1 + y)(1 - y)$

H) $y' = y(1 + y)$

I) $y' = t(1 - t)$

J) $y' = y(1 - y)$