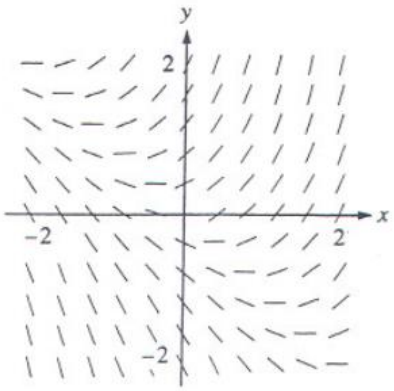
Slope Field Practice MC: Remote Learning 2020

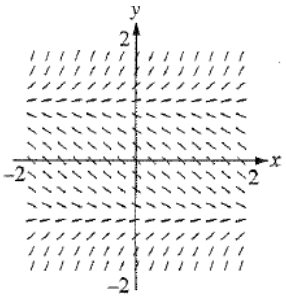


24. Shown above is a slope field for which of the following differential equations?

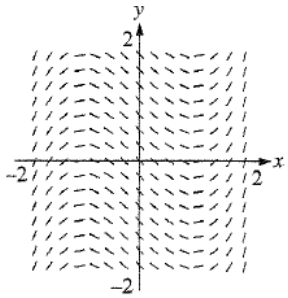
A) $\frac{dy}{dx} = 1 + x$ B) $\frac{dy}{dx} = x^2$ C) $\frac{dy}{dx} = x + y$ D) $\frac{dy}{dx} = \frac{x}{y}$ E) $\frac{dy}{dx} = \ln y$

27. Which of the following could be the slope field for the differential equation $\frac{dy}{dx} = y^2 - 1$

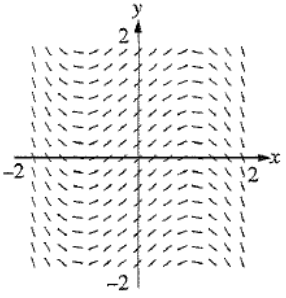
(A)



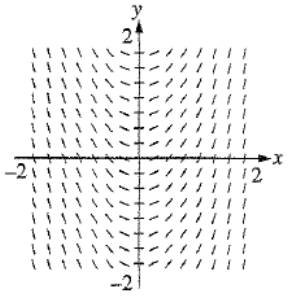
(B)



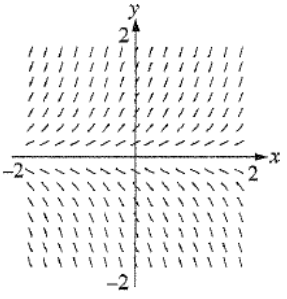
(C)

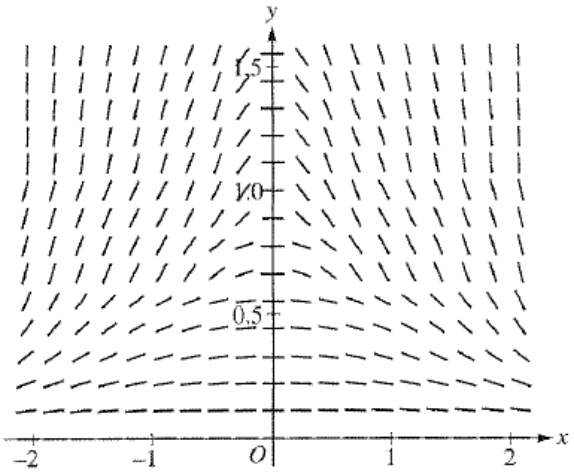


(D)



(E)

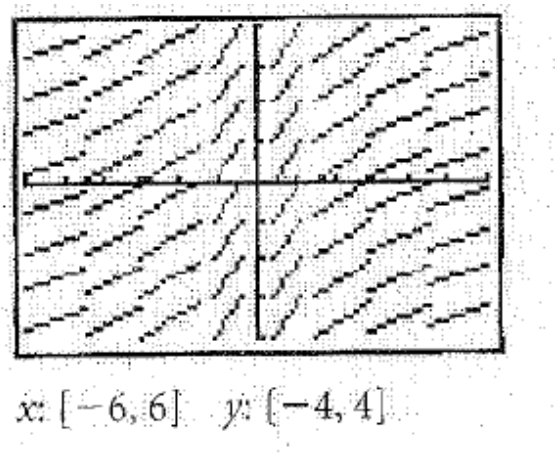




15. The slope field for a certain differential equation is shown above. Which of the following could be a solution to the differential equation with the initial condition y(0) = 1?

A) $y = \cos x$
B) $y = 1 - x^2$
C) $y = e^x$
D) $y = \sqrt{1-x^2}$
E) $y = \dfrac{1}{1+x^2}$

2. Indicate which differential equation is represented in the slope field graph.



A) $\dfrac{dy}{dx} = x^3$ B) $\dfrac{dy}{dx} = \sqrt[3]{x}$ C) $\dfrac{dy}{dx} = \tan^{-1} x$ D) $\dfrac{dy}{dx} = x^{\frac{-2}{3}}$ E) $\dfrac{dy}{dx} = x^{\frac{2}{3}}$