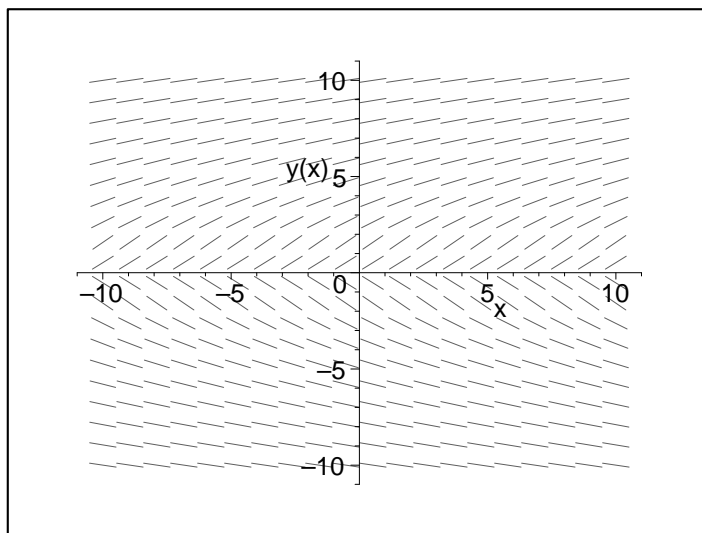


1. (6 points) Which of the following differential equations has the slope field given in the figure?
(Circle the letter of each correct answer.)

- a. $\frac{dy}{dx} = \frac{2x}{1+x^2}$ b. $\frac{dy}{dx} = e^{-y^2}$ c. $\frac{dy}{dx} = \frac{2x^2}{1+x^4}$
- d. $\frac{dy}{dx} = \frac{2y}{1+y^2}$ e. $\frac{dy}{dx} = e^{-x^2}$ f. $\frac{dy}{dx} = \frac{2y^2}{1+y^4}$



2. (8 points) Circle “True” or “False” for each of the following statements. No explanation is necessary. (Remember that “True” means the statement is always true.)

(a) The function $y(t) = 0$ is an equilibrium solution of the differential equation $dy/dt = y + t$.

True. False.

(b) If $P(t)$ is a solution of the logistic differential equation, $dP/dt = .5P(200 - P)$, then so is the function $2P(t)$.

True. False.