

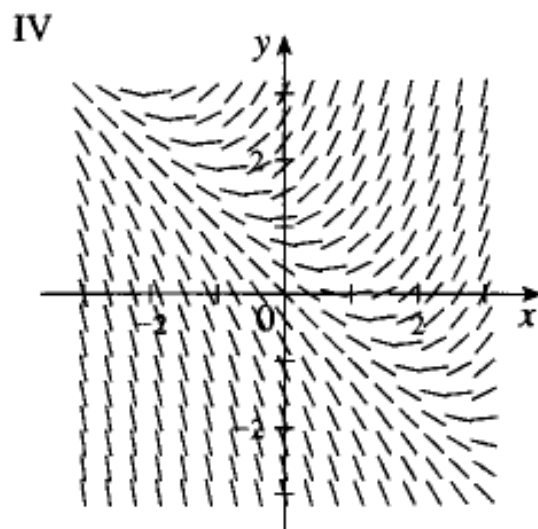
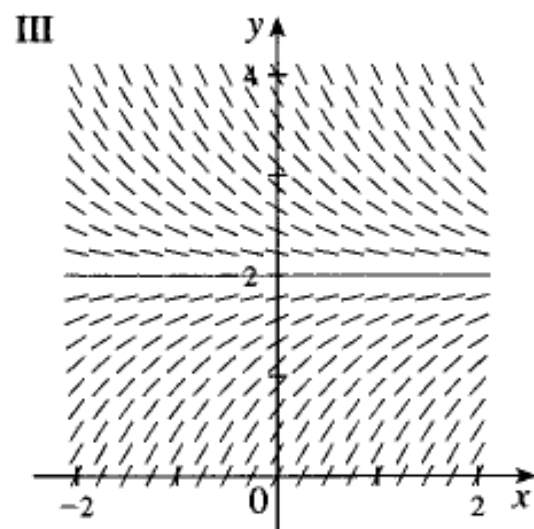
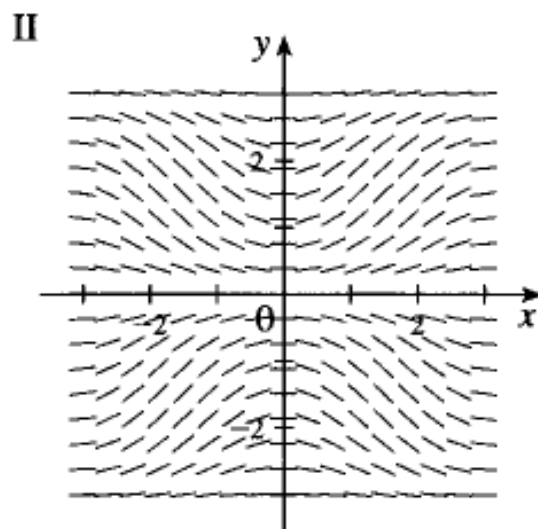
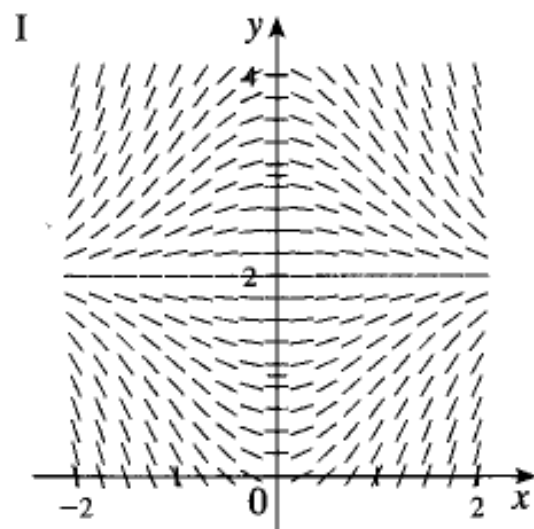
**3–6** Match the differential equation with its direction field (labeled I–IV). Give reasons for your answer.

**3.**  $y' = 2 - y$

**4.**  $y' = x(2 - y)$

**5.**  $y' = x + y - 1$

**6.**  $y' = \sin x \sin y$



**7.** Use the direction field labeled II (above) to sketch the graphs of the solutions that satisfy the given initial conditions.

(a)  $y(0) = 1$       (b)  $y(0) = 2$       (c)  $y(0) = -1$

**8.** Use the direction field labeled IV (above) to sketch the graphs of the solutions that satisfy the given initial conditions.

(a)  $y(0) = -1$       (b)  $y(0) = 0$       (c)  $y(0) = 1$