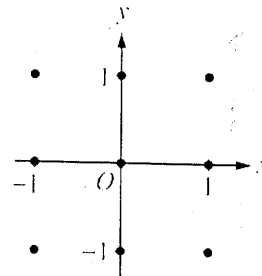


5. Consider the differential equation $\frac{dy}{dx} = (y - 1)^2 \cos(\pi x)$.

- (a) On the axes provided, sketch a slope field for the given differential equation at the nine points indicated.
(Note: Use the axes provided in the exam booklet.)



- (b) There is a horizontal line with equation $y = c$ that satisfies this differential equation. Find the value of c .
(c) Find the particular solution $y = f(x)$ to the differential equation with the initial condition $f(1) = 0$.
-