1. Match the following differential equations to their slope fields.

\[ \frac{dy}{dx} = e^{x^2} \quad \text{i)} \quad \frac{dy}{dx} = e^{-2x^2} \quad \text{ii)} \quad \frac{dy}{dx} = e^{-0.5x^2} \quad \text{iii)} \quad \frac{dy}{dx} = e^{-0.5x} \cos x \]

\[ \frac{dy}{dx} = \frac{1}{(1 + 0.5 \cos x)^2} \quad \text{iv)} \quad \frac{dy}{dx} = -e^{-x^2} \quad \text{v)} \]

2. Match the following differential equations to their slope fields. Create differential equations for the remaining slope fields. Note – there can be many answers.

\[ y' = 4 - y \quad \text{i)} \quad y' = \sin x \quad \text{ii)} \quad y' = 1 + y \quad \text{iii)} \]

\[ \begin{align*}
&\text{A} \quad \text{B} \quad \text{C} \\
&\text{D} \quad \text{E} \quad \text{F}
\end{align*} \]