ME 315: HEAT AND MASS TRANSFER

HW #0 WARM-UP EXERCISE

1. Solve the following ordinary differential equations.

   (i) $\dfrac{dy}{dx} + a = 0$

   (ii) $\dfrac{dy}{dx} + ax = 0$

   (iii) $\dfrac{dy}{dx} + ay = 0$

   (iv) $\dfrac{dy}{dx} + ay + b = 0$

   (v) $\dfrac{d^2y}{dx^2} + a = 0$

   (vi) $\dfrac{d^2y}{dx^2} + a^2y = 0$

   (vii) $\dfrac{d^2y}{dx^2} - a^2y = 0$

   (viii) $\dfrac{d^2y}{dx^2} - a^2y + b = 0$

   (ix) $\dfrac{1}{r}\dfrac{d}{dr}\left(r\dfrac{dy}{dr}\right) + a = 0$