Activity 9

1) Integrate the wave-equation for a taut string of Length $L = 10$ with $c = 1$ and produce a heat map of $y(x,t)$, for the string initially at rest with clamped boundary ($y(0,t) = y(L,t) = 0$) conditions and an initial displacement of

a) $y(x,0) = \sin\left(\frac{2\pi x}{10}\right) + \sin\left(\frac{\pi x}{10}\right)$

b) $y(x,0) = e^{-4(x-5)^2}$