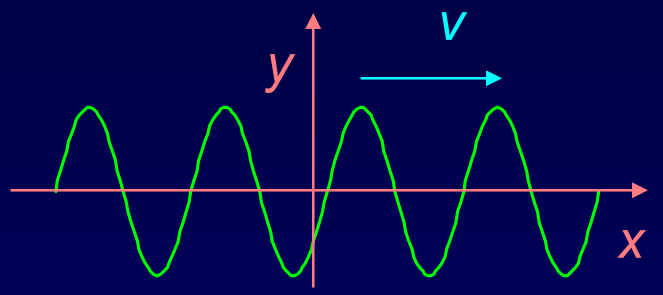
Solution

A harmonic wave moving in the positive x direction can be described by the equation $y(x,t) = A\cos(kx - \omega t)$.

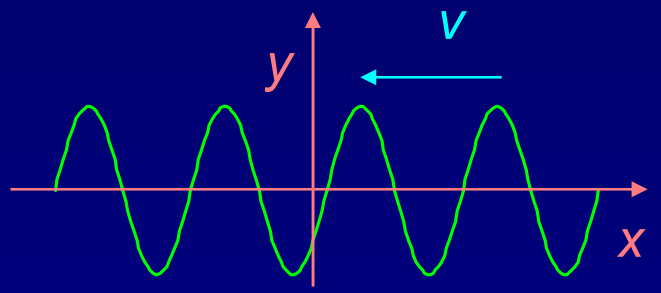


Which of the following equations describes a harmonic wave moving in the negative x direction?

a) $y(x,t) = A\sin(kx - \omega t)$

b) $y(x,t) = A\cos(kx + \omega t)$

c) $y(x,t) = A\cos(-kx + \omega t)$



In order to keep the argument constant, if t increases, x must decrease.