***Q:***

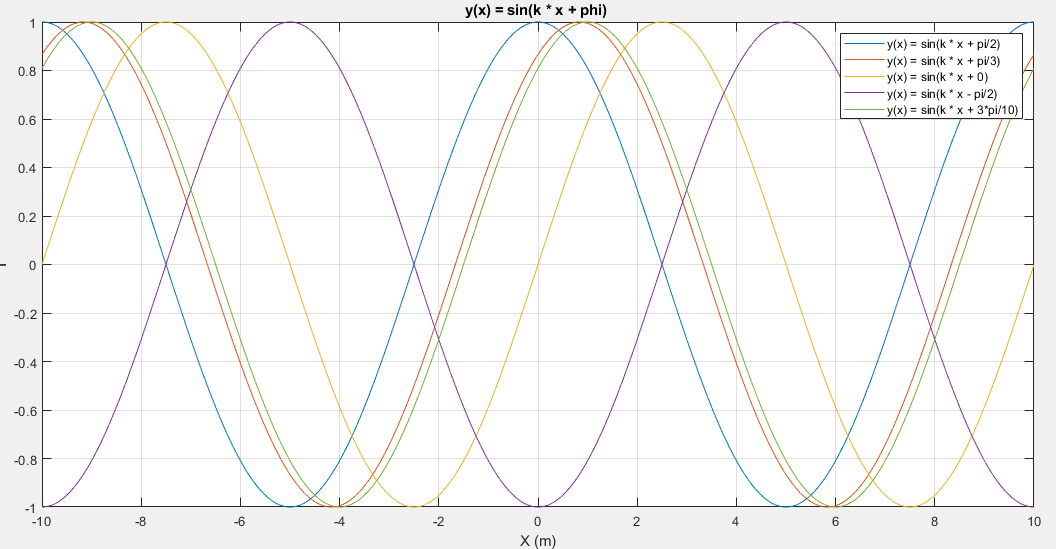
1. Show that if the maximum positive displacement of a sine wave at t=0 is at a distance of cm from the origin, its initial phase angle is given by the following equation

where the wavelength λ is in centimeters.

1. Obtain the initial phase and draw the wave for and the initial distances equal to 0, , , 5 and cm.
2. If we use the cosine function instead of the sine function, determine the initial phase angles for part (b).

***Sol:***





1. As it is known, the difference of sine or cosine is only , so we have to add to the answers.

