

Is the following equation a solution to the wave equation: $y(x,t)=A \sin(kx-\omega t)$

(a) yes

(b) no

What is the velocity of the wave: $y(x,t)=A \sin(kx-\omega t)$

(a) k/ω

(b) ω/k

(c) $-\omega/k$

(d) A

(e) $-k/\omega$

What is the velocity of the wave: $y(x,t)=A \cos(kx-\omega t+\phi)$

(a) $-A$

(b) ω/k

(c) $\omega/k+\phi$

(d) $\omega/k-\phi$

(e) $-k/\omega$

Which equation describes a wave moving to the left?

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

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

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

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

(e) both (b) and (c)

What is the relative phase of the red curve with reference to the green curve?

(a) π

(b) $\pi/2$

(c) $-\pi/2$

(d) 0

(e) π

