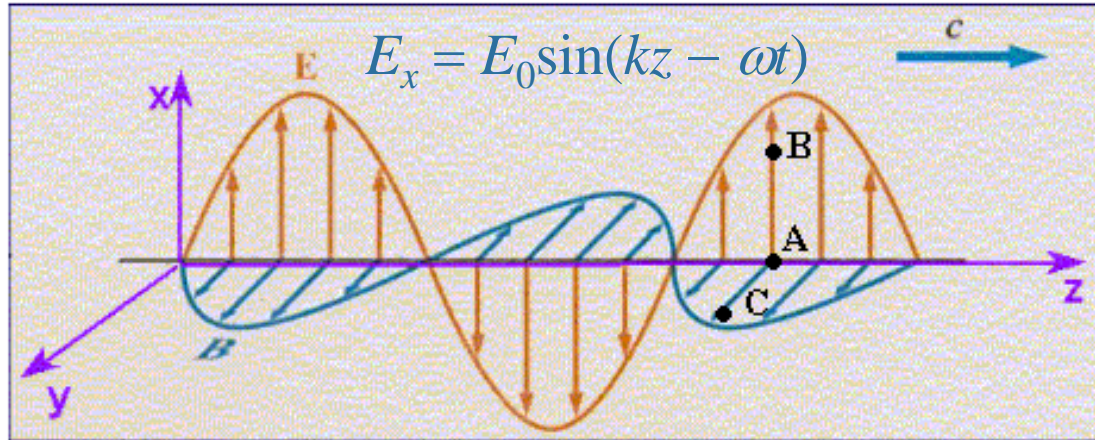


# CheckPoint 2a



An electromagnetic plane-wave is traveling in the +z direction. The illustration below shows this wave at some instant in time. Points A, B and C have the same z coordinate.



Compare the magnitudes of the electric fields at points A and B

A.  $E_A < E_B$

**B.  $E_A = E_B$**

C.  $E_A > E_B$

$$E = E_0 \sin(kz - \omega t):$$

$E$  depends only on  $z$  coordinate for constant  $t$ .

$z$  coordinate is same for A, B, C.

Electromagnetic Waves: Question 1 (N = 785)

