

Name \_\_\_\_\_ Disc \_\_\_\_\_

PY212  
**Quiz 10**

The magnetic field in a plane wave is described by the equation  $\vec{B}(x,y,z,t) = B_o \sin(ky - \omega t)\hat{i}$ .  
Answer the following questions about the wave.

- 1) What direction is the wave traveling in? Explain.
  
  
  
  
  
  
  
  
  
  
- 2) What is the magnitude of the Electric field of the wave? Explain.
  
  
  
  
  
  
  
  
  
  
- 3) In what direction is the Electric field pointing? Explain.
  
  
  
  
  
  
  
  
  
  
- 4) Write the mathematical expression for the Electric field.