

10. Using  $\vec{S} = (1/\mu_0)\vec{E} \times \vec{B}$ , we see that (on the right hand) letting the thumb be in the  $\vec{E}$  direction and the index finger be in the  $\vec{B}$  direction means that the middle finger (held perpendicular to the other two, making a “triad” of the thumb and two fingers) points in the direction of wave propagation (the direction of  $\vec{S}$ ). Holding the right hand in this manner can facilitate checking the directions in the Figures. A more algebraic approach is to note that  $\hat{j} \times \hat{k} = \hat{i}$ . This is especially useful for checking Figures 34-6 and 34-7.