

Physics 391
Lesson 2 Preflight

1. In your book on p. 649, Maxwell's Equations are the first four equations listed. Compare these to the equations you learned in Physics 215 in Richard Wolfson's Essential University Physics, p. 511, Table 29.2. These are the same equations so describe what your optics book did to write them in the newer form.
2. Describe the steps the book takes to go from Maxwell's equations to the wave equations.
3. Describe how we know that an electromagnetic wave in free space is transverse to the direction of propagation.