<u>**PREFLIGHTS**</u>   **LESSON 27 – MAGNETIC DIPOLE RADIATION**

LEARNING OBJECTIVE:
Determine how oscillating magnetic dipoles radiate.

1) Describe in words the three approximations we make to derive the equations for dipole radiation. Which of these approximations are redundant? Why is it redundant?

2) Griffiths says that the equations for radiation from oscillating magnetic dipoles are "remarkably similar in structure to the fields of an oscillating *electric* dipole." What are the differences between these two sets of equations?

3) Are the equations for dipole radiation plane wave equations? If not, what are the differences between the dipole radiation equations and the plane wave equations?

4) ***Note: This is a review question from Chapter 7.*** Maxwell added an extra term to Ampère's law with reasoning based on the now-discredited ether model. What is a better argument for adding the extra term to Ampère's law?

5) What did you find difficult or confusing in the pre-class work? If nothing was difficult or confusing, tell me what you found most interesting. Please be as specific as possible.

6) Document whatever help you received on the preclass work.