1. Griffiths Problem 9.11

2. Griffiths Problem 9.12 (Remember that for EM waves there is a relationship between $E$ and $B$.)

3. Griffiths Problem 9.16

4. Griffiths Problem 9.33

5. Griffiths Problem 9.34

6. Griffiths Problem 9.36

7. Consider the equation you derived as part of problem 9.34 (Eq. 9.199). Show that the transmission coefficient is unity when $n_2 = \sqrt{n_1 n_3}$ and the thickness of the material whose index of refraction is $n_2$ is one quarter of a wavelength. This is of practical importance in fabricating optical elements for telescopes, cameras, etc. Such elements are often given a thin “anti-reflective” coat of magnesium fluoride ($n = 1.38$) to maximize transmission.