“It is not enough to be wrong. One must also be polite.”—N. Bohr

1) [10 points] Jackson 6.15 (a)–5, (b)–5.

2) [20 points] Jackson 7.2 (a)–17 (b)–3. Set all $\mu$’s $= \mu_0$. It will be convenient to express your answer in terms of the reflection coefficients at the two interfaces,

$$r_{12} = \frac{n_2 - n_1}{n_2 + n_1}$$  \hspace{1cm} (1)

and

$$r_{23} = \frac{n_3 - n_2}{n_3 + n_2}$$  \hspace{1cm} (2)

(although it will still not be very compact). Keep a copy of your solution; we will revisit this problem next week.

3) Jackson 7.16 [20 points] (a)–3, (b)–12, (c)–5. Yet another set of Fresnel equations! This was a given as a problem back when we had written comprehensive exams.