

Homework Set #4, Physics 630, due Friday, Oct.10, at 5 pm in Brightspace

Solve problems 3.5, 3.12, 3.26, 4.2

Plus: For fun and for self-improvement, solve 3.23 as well, but don't turn it in.

Aside concerning #3.12: The complete elliptic integral of the 1st kind has different conventions in different references. The final expression in Jackson appears to be using the convention of Gradshteyn and Ryzhik, K^{GR} , which differs from the convention K^{M} used in Mathematica. So if you perform any integrals using Mathematica, you might want to know the relationship, namely:

$$K^{\text{GR}}(k^2) = K^{\text{M}}(k)$$