Classical Mechanics - Problem Set 8 – Due Thursday, April 9

Problem 1)

Solve Problem 2 on page 422 in Goldstein.

Problem 2)

Solve Problem 23 page 425 in Goldstein. Use the vector potential

\[ \vec{A} = -\frac{1}{2} \vec{r} \times \vec{B} = \frac{1}{2} ( -yB_0 \hat{x} + xB_0 \hat{y} ) \].

Note that you can drop the factor “c” in the denominator in the definition for \( \alpha \) since it doesn’t occur if all quantities are calculated in the SI system.