HW #4

1. Goldstein 4.14

2. Goldstein 4.22

3. Goldstein 4.23 [Foucault pendulum]

Hints: no air resistance, assume that ω (angular freq. of Earth rotation) is small (i.e., work in $\theta(\omega)$ approximation). Write down EoM for x & y of the pendulum & solve for $\xi = x + iy$. assume small oscillations for the pendulum.

4. **Goldstein 4.1**

5. **Goldstein 4.10**