Reading: Chapter 9.1 - 9.5, 9.7-9.9

1. **K&K 9.1**: Pivoted rod on car. Note that the angle $\theta$ should be measured from the horizontal.

2. **K&K 9.2**: Truck door

3. **K&K 9.4**: Weight on a car's wheels

4. **K&K 9.7**: Apparent force of gravity. Solve for $\frac{\Delta g}{g}$ where $\Delta g = g_{\text{equator}} - g_{\text{pole}}$. Put in known values for Earth (radius $R_e = 6.37 \times 10^6$ m; completes one rotation in 24 hrs.) and get a numeric answer.

5. **K&K 9.9**: Train on tracks

6. **K&K 9.11**: Racing hydrofoil

7. **OPTIONAL K&K 9.12**: Pendulum on rotating platform