You have 10 minutes to complete the quiz. Calculators are not permitted, and remember to show your calculations and explain your reasoning in order to receive full credit.

1. A ball is dropped from the top of Sather Tower (starting position $(0, 0, 93.6)$ meters). If the acceleration due to gravity is $(0, 0, -9.8)m/s^2$, find the ball’s position as a function of time.

2. Using the formula $\kappa = |dT|/|ds|$ or $\kappa = |T'(t)|/|r'(t)|$, find the curvature of the ball’s path as a function of time. Explain your answer.