Problem 1: An LRT train can achieve average accelerations of 1.4 m/s^2. Suppose such a train accelerates from rest at this rate for 3.41 s. *How far does it travel in this time?*

For numbers 2 and 3: A ball is thrown vertically upward with a speed of 15 m/s from the roof of a 28-m tower. The ball did not hit the tower on its way back down and landed in the ground below. Neglecting air resistance,

Problem 2: Find the speed of the ball just before it hits the ground.

Problem 3: Determine the total time elapsed from when the ball is thrown upward until it hits the ground.

For numbers 4 and 5: A football player throws the ball upward with an initial velocity of 8.0 m/s and a horizontal velocity component of 24.0 m/s. Neglecting air resistance,

Problem 4: How long does it take for the football to reach the highest point of the trajectory?

Problem 5: What is the maximum height of the trajectory?