



NAME

DATE

**PROBLEM: AP-6**

**GIVEN:** The position of a crate sliding down a ramp is given by  $x = (0.25t^3)$  m,  $y = (1.5t^2)$  m,  $z = (6 - 0.75t^{5/2})$  m, where  $t$  is in seconds. Determine the magnitude of the crate's velocity and acceleration when  $t = 2$  s.

**REQUIRED:**

**SOLUTION:**