



NAME

DATE

**PROBLEM: AP-12**

**GIVEN:**

If a particle's position is described by the polar coordinates  $r = (2 \sin 2\theta)$  m and  $\theta = (4t)$  rad, where  $t$  is in seconds, determine the radial and transverse components of its velocity and acceleration when  $t = 1$  s.

**REQUIRED:**

**SOLUTION:**