



## Question

A projectile is fired straight up with initial speed  $v_0$ . Assuming that air resistance is negligible and the external force is due to gravity, which the following statements about the position function is NOT true?

- A.  $|\vec{r}'(0)| = v_0$ .
- B.  $\vec{r}''(t) = -g\vec{j}$ .
- C. The  $\vec{j}$ -component of  $\vec{r}(t)$  is zero.
- D. The  $\vec{i}$ -component of  $\vec{r}(t)$  is zero.

