Derivatives and Integrals of Vector Functions

Question

Suppose that a plane curve is parametrized by $\vec{r}(t) = f(t)\vec{i} + g(t)\vec{j}$ and $\vec{r}\,'(3) = \vec{0}$. What can you conclude about the curve near $\vec{r}(3)$?

A. The tangent line to the curve is horizontal at $\vec{r}(3)$.

B. The tangent line to the curve is vertical at $\vec{r}(3)$.

C. There is a corner in the curve at $\vec{r}(3)$.

D. There is not enough information to decide.