The figure shows a frictionless channel in the shape of a segment of a circle with the center at $\mathbf{O}$. The channel has been anchored to a frictionless horizontal table top. You are looking down at the table. Forces exerted by the air are negligible.

A ball is shot at high speed into the channel at $\mathbf{p}$ and exits at $\mathbf{r}$.

Which path in the figure would the ball most closely follow after it exits the channel at $\mathbf{r}$ and moves across the frictionless table top?


