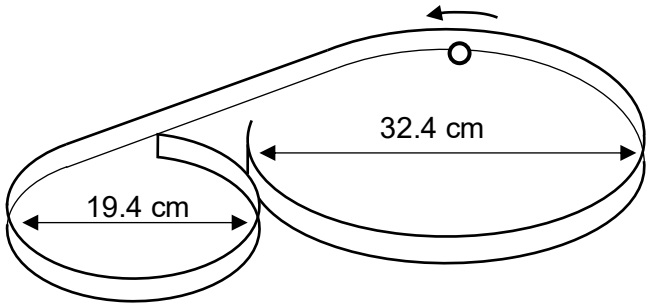
10 A small sphere is travelling horizontally around the circumference of the bigger circular loop in the figure below with an angular velocity of 63.0 rad s^{-1}.



The sphere then moves into the smaller loop and continues to move along its circumference.

What will be the angular velocity of the sphere when it is moving in the smaller loop?

A 37.7 rad s^{-1} **B** 63.0 rad s^{-1} **C** 105 rad s^{-1} **D** 126 rad s^{-1}