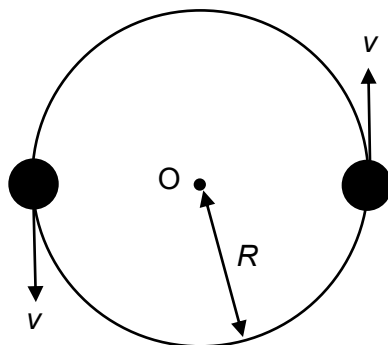**10** Two stars of equal mass M move with constant speed v in a circular orbit of radius R about their common centre of mass O as shown.

What is the magnitude of the centripetal force on each star?

A $\dfrac{GM^2}{4R^2}$ **B** $\dfrac{GM^2}{R^2}$ **C** $\dfrac{2Mv^2}{R}$ **D** $\dfrac{Mv^2}{2R}$