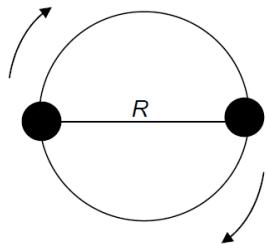


- 11 A binary star system, with two stars of the same mass M , moves in circular orbit as shown below.



Which expression correctly gives the period of rotation of the system if they have the same mass?

A $\sqrt{\frac{4R^3\pi^2}{GM}}$

B $\sqrt{\frac{2R^3\pi^2}{GM}}$

C $\sqrt{\frac{4R^3\pi^2}{GM^2}}$

D $\sqrt{\frac{4R^2\pi^2}{GM}}$