13 Satellites are in circular orbits around different planets.

When the mass of the satellite is m and the mass of the planet is M, the radius of the orbit is r and the centripetal force on the satellite of mass m is F.

The mass of a second planet is $3M$. A satellite of mass $2m$ orbits the planet with orbital radius $4r$.

What is the centripetal force on the satellite of mass $2m$?

A $0.0625F$ **B** $0.375F$ **C** $1.50F$ **D** $6.00F$