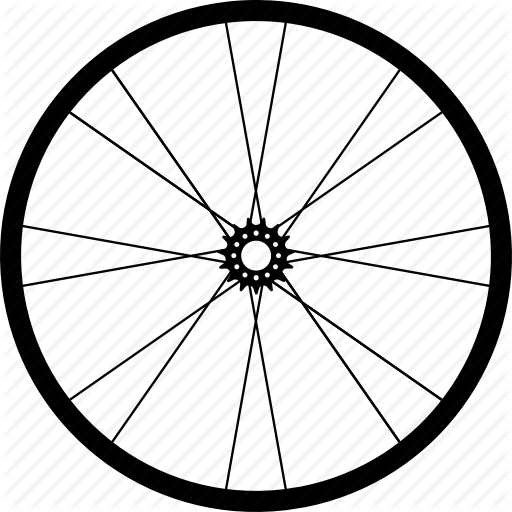
AP Problems

FR 1-Qual/Quan

A ring shaped space-station, far away from any other mass, is spinning on about its central axis.



1. If the station is 10 km in diameter, what tangential velocity will emulate earth’s gravity?

Justify your answer.

1. If a physics student travelled from the ring to the central hub, will the space station rotate:
   1. Faster
   2. Slower
   3. The Same
2. A biology student with poor physics understanding, is 5m from the hub and releases a tennis ball. Describe the motion of the ball.