



4. CJ6 9.CQ.022. [310915] Conceptual Example 13 provides background for this question. A cloud of interstellar gas is rotating. Because the gravitational force pulls the gas particles together, the cloud shrinks, and, under the right conditions, a star may ultimately be formed. Would the angular velocity of the star be less than, equal to, or greater than, the angular velocity of the rotating gas?

- greater than
- equal to
- less than

Justify your answer.

5. CJ6 9.CQ.023. [310980] A person is hanging motionless from a vertical rope over a swimming pool. She lets go of the rope and drops straight down. After letting go, is it possible for her to curl into a ball and start spinning?

- yes
- no

Justify your answer.