Worksheet rotation: angular conservation

**1.** You are spinning in a chair with hands outstretched. You then quickly pull your hands close to your chest.

**a)** Has your inertia increased, decreased, or remained constant?

**b)**  Has your angular momentum increased, decreased, or remained constant?

**2.** At time a 2.75kg air pocket fluctuation of sound, dust, and musical energy has a position vector relative to the vocaloid projector emitting it. The air pocket fluctuation travels around the vocaloid source on its musical trajectory with a linear velocity of , t being in seconds. Hint, happens to simultaneously be your lever arm and radius of the emitted sound’s region.

**a)** When what is the air pocket fluctuation's angular momentum?

**b)** When what is the torque musically acting on the air particle's fluctuation?