What You Should Know About "Molecular Clouds"!

1.) What is the density of matter in space? (1 particle per cubic cm)

2.) What is the density at the core of a giant molecular cloud? (10,000 to 1,000,000 particle per cubic cm)

3.) How big are giant molecule clouds? (they can cover 10s of parsecs)

4.) What is a protostar? (a collapsing mass that hasn't yet ignited nuclear fusion at its core)

5.) Why is gravitational collapse of the material in a molecular cloud not enough to produce a star? (the collapse produces heat, which provides an outward force that stops the collapse)

6.) When fusion finally does begin, what two juxtaposed forces govern the dynamics of a star's core? (gravity pushing inward and the nuclear reaction pushing outward)

7.) When does a protostar become a star? (when fusion ignites in the core)

8.) How much large would Jupiter have had to be to ignite fusion in its core and become a star? (3 or 4 times its current size)