Module 05 Liquid Rocket Problem

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1. **Name:** _____
2. **Given:** A Liquid Oxygen/Liquid Hydrogen thrust chamber that burns for 2 minutes at a total flow rate of 347 kg/s with a mixture ratio of 6.0. The propellants are stored at their boiling temperatures and atmospheric pressure.
3. **Find:**
   a. The mass of the fuel for the 2 minute burn (without contingencies)
   b. The mass of the oxidizer for the 2 minute burn (without contingencies)
   c. Volume of hydrogen for the 2 minute burn (without contingencies)
   d. Total length (in meters) of a cylindrical tank with hemispherical ends for the hydrogen if the inner diameter is 1.6 meters

Write your answer for (d) in the box below.