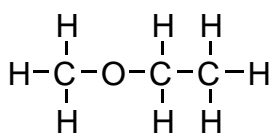
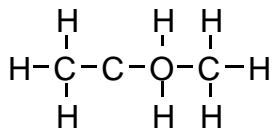


When Solving Problems, be sure to show all work

1. If it is 105 miles from Auburn to Atlanta, what is it in km? (10%)
2. How many liters are there in 10 gal gas? (10%)
3. The mass of Mars is 6.37×10^{23} kg and its radius is 3600 km. Calculate the force of gravity on a 100 kg person standing on the surface of Mars. (15%)
4. The earth and the moon attract one another with a very large force of 1.9×10^{20} N. (15%)
 - a. What scientist first determined this? _____
 - c. If the earth and the moon attract one another with such a great force, why don't they crash into each other?
5. a. The two structures below both have the formula C_3H_8O . However, one is not a correct structure. Indicate which is not correct and draw another correct isomer of C_3H_8O . (10%)



A



B

- b. A chlorofluoro carbon has the molecular formula CF_2Cl_2 what is its molecular weight? (5%)
6. Briefly explain why the church condemned Galileo and what they now say about him. (15%)
 7. Some properties of certain objects cannot be measured accurately because the very act of measuring the property alters the property. Give an example of such a property of an object we have talked about. What do scientists do about this problem? (15%)
 8. Last Friday we saw a short film about the alkali metals. What was the most striking thing about this film? (5%)

Useful Information:

Meter = 39.37 inches = 1.094 yards

Yard = 0.9144 meter

Mile = 1.609 kilometers

Inch = 2.54 centimeter

Quart = 0.9463 liter

Pound = 0.453 kilograms

Ounce = 28.53 gram