Outside on a cold winter day a student opened up a cigarette lighter and poured 1.50 grams of liquid butane (b.p. -0.5 C°) into an otherwise empty balloon. The balloon was then brought indoors where the temperature was 22° C. If you assume that the pressure was 1 atmosphere, what would be the size of the balloon in liters?

If the balloon were to see a spark, it might explode. What volume of air would be needed for the combustion reaction to go to completion?