Suppose that the lift force **F** (M L T-2) on a missile depends on characteristic length scales D (L) and r (L) of the missile.

Additionally, **F** may depend on the air density ρ (M L-3),

the viscosity µ (M L-1 T-1) and missile velocity **v** (L T-1) .

a) Develop a model for the lift force **F**.

b) Find two other possibilities to represent the standardized lift force **F** in terms of non-dimensional products. (Buckingham’s Theorem)