We would like to know the nature of the drag forces experienced by a sphere as it passes through a fluid. The sphere has a low speed. Therefore, the drag force is highly dependent on the viscosity of the fluid. The fluid density is to be neglected.

a) Use dimensional analysis to develop a model for drag force: **F** (M L T-2) as a function of the radius r (L) and velocity **v** (L T-1) of the sphere and the viscosity: µ (M L-1 T-1) of the fluid.

b) What is required to use the model for **F** above to be of use for predictions?