Name: _____

ASTR500: Mock Cumulative Exam Question #7
Gas Infall and Stochastic Star Formation in Galaxies in the Local Universe (Kauffmann et al. 2006)
31st March, 2009 – Michael Kirk

Star formation is a dusty process. As a protostar begins to shine, radiation pressure will push some nearby grains away, while others will fall into it. Ignoring magnetic fields and stellar winds, estimate the minimum size that a dust particle must have to avoid being blown out of the stellar system of a solar type star.

Useful constants:
G = 6.67×10^{-8} erg cm g^{-2}
$M_\odot$ = 2×10^{33} g
$L_\odot$ = 4×10^{33} erg s^{-1}