HOMEWORK #8

Due 5:00 PM Friday March 31

Chapter 27: 2, 3, 17, 21, 35, 36

Hints

21. Begin with the 2-dimensional version of Eq. 27.39 note $du_x du_y = u\, du \cos\theta$, integrate θ from 0 to 2π

35. If you use the molar version of 27.49, i.e. $Z_A = rs\left(\frac{8RT}{pM}\right)^{\frac{1}{2}}$ your initial answer may be in units of s^{-1} mol, thus you would need to multiply by 6.02×10^{23} mol^{-1} to get final units of s^{-1} .

36. Use equations for Z_A from problem 35, now invert this to obtain the time between collisions!