Galaxy Name	Milky Way	M31	M33
Halo Mass ($10^{12} M_{\odot}$)	1.975	1.921	0.187
Disk Mass ($10^{12} M_{\odot}$)	0.075	0.12	0.009
Bulge Mass ($10^{12} M_{\odot}$)	0.01	0.019	0.0
Total Mass ($10^{12} M_{\odot}$)	2.06	2.06	0.196
f_{bar}	0.041	0.067	0.046

Table 1: Masses of components for each galaxy, total masses of galaxies, and baryon fraction (f_{bar}). Total mass of the local group is 4.316 $10^{12} M_{\odot}$.

Question 4:
1) Milky Way and M31 are the same mass in this simulation. The halos of these galaxies vastly dominate their masses.
2) M31 has more stellar mass than the Milky Way. Because M31 has more stellar mass, I expect it to be more luminous than the Milky Way.
3) Milky Way has more dark matter mass than M31. This is not surprising given the galaxies are the same mass but M31 has more stellar mass. To have the same mass, Milky Way makes up the mass difference in having more dark matter mass.
4) Milky way has a baryon fraction of 0.041, M31 has 0.067, and M33 has 0.046. This is much less than the universe's mass fraction of ~0.16. The extra baryon mass could come from rogue stars, dust or diffuse gas in the circumgalactic medium. Galaxies can turn this gas into stars far easier than gas gas wandering around in the CGM.