**Chem 1013: mini-quiz # 12: mole-mass-count word problem A 4 pts March 4**

Your name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Show work !

A lethal dose of the poison sodium cyanide is about 0.98 g for a 160 pound male named Bob. Given that the molecular weight of sodium cyanide is 49 g/mol, how many molecules of sodium cyanide does it take to kill Bob? Note that 1 mol count= 6.0\*1023 molecules.

 0.98/49 (divide up)=mol cyanide= 0.02 mol

49 g /mol

 6\*1023 molecules=1 mol

Start here 0.98 g 0.02\*6\*1023 (multiply down) = molecules cyanide=1.2\*1022

 \_\_\_\_1.\*1022\_\_\_\_\_molecules sodium cyanide kills Bob

**Chem 1013: mini-quiz # 12: mole-mass-count word problem B 4 pts March 4**

Your name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Show work !

Smoking two good medical marijuana joints is often prescribed as a way to reduce the nausea connected with cancer chemotherapy. The relevant chemical in the joints is THC (tetrahydrocannabinol). Given that the two joints deliver about 0.0639 g of THC , how many molecules of THC are being consumed? The molecular weight of THC=314.5 g/mol. 1 mol count =6\*1023 molecules

 0.0629/314.5 (divide up) = mol THC=0.0002 mol THC

 314.5 g/mol 6\*1023 molecules=1 mol

Start here 0.0629 g 0.0002\*6\*1023 (multiply down)=molecules THC=1.2\*1020

1.2\*1020\_molecules of THC in 2 joints