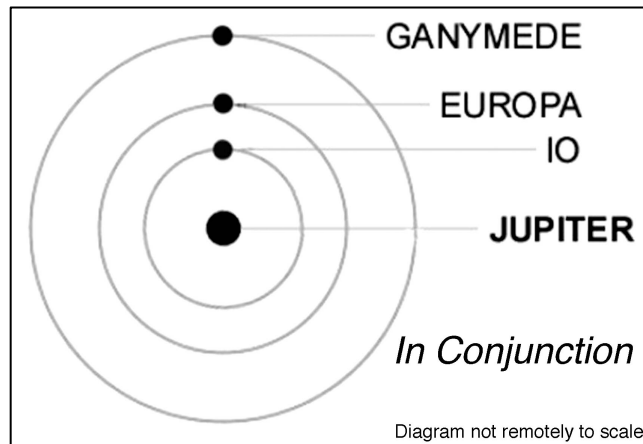


EXTRA CREDIT 2



7a. The orbital period of Io (one of Jupiter's moons) is approximately 1.75 earth-days.* Europa's period is twice as long as Io's. Ganymede's is twice as long as Europa's. If all three moons are in conjunction at 12:00 as shown above, how long will it take for them to be in conjunction again at 12:00? ... and again... and again..

Extra Credit. Now lets up the ante. [This is pretty hard.] Callisto is another of Jupiter's moons. It has an orbital period of 16.66 days. If all 4 moons are in conjunction (at 12:00), how long until all 4 are in conjunction again (at 12:00)?

* All of the orbital periods in this problem and the next are approximations.