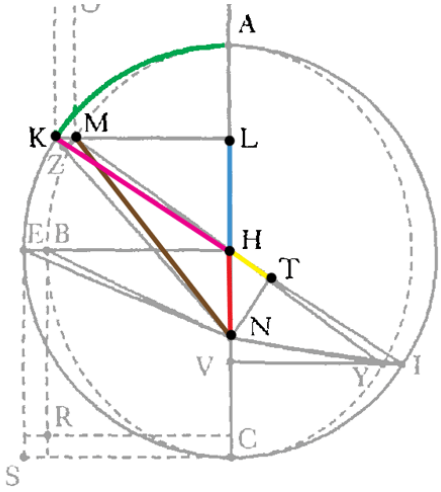
Chapter 60 Homework

Upon reaching chapter 60, you have covered all of the chapters required to re-experience with Kepler his development of an understanding of the planetary motions: an understanding that is still used today by NASA. But, do *you* understand how the planets move? Find out by putting your knowledge to practice. If you can't, then it's time to make a discovery.



It's time to make astronomical tables! For Kepler's Mars orbit, the eccentricity HN is 9265 (as discovered in Chapter 42). Can you work out the following?

1.) What is the mean anomaly (in degrees) corresponding to an eccentric anomaly of 40°?

2.) What is the equated anomaly (in degrees) corresponding to an eccentric anomaly of 36°35'16"?

3.) If the equated anomaly is 12°34'56", then what is the eccentric anomaly?

4.) An equated anomaly of 34°56'12" has a mean anomaly of _____.

5.) What is the eccentric anomaly for a mean anomaly of 24°?

6.) What is the equated anomaly for a mean anomaly of 33°?

To check your answers, send them to *animations@wlym.com*.