Problems

7.1 Kepler's Laws of Planetary Motion   17.

The closest Earth comes to the sun is $1.47{\times}10^8$ km, and Earth's farthest distance from the sun is $1.52{\times}10^8$ km. What is the area inside Earth's orbit?

  a. $2.23{\times}10^{16}$ km^2
  b. $6.79{\times}10^{16}$ km^2
  c. $7.02{\times}10^{16}$ km^2
  d. $7.26{\times}10^{16}$ km^2

18.

Earth is $1.496{\times}10^8$ km from the sun, and Neptune is $4.490{\times}10^9$ km from the sun. What best represents the number of Earth years it takes for Neptune to complete one orbit around the sun?

  a. 10 years
  b. 30 years
  c. 160 years
  d. 900 years