Distance Conversion Worksheet

Given: 1 parsec (pc) = 3.26 light years
1 Astronomical Unit (AU) = 1.495678 E+11 meters
1 Light Year (LY) = 9.46053 E+15 meters

1. 1 LY = ___________ AU

2. 1 pc = ___________ meters

3. 22,000 pc = ___________ LY

4. 1 AU = ___________ pc

5. 4 AU = ___________ LY

6. The circumference of the earth is estimated to be 40,000 km (or 24,900 miles). How many times would you have to travel around the equator to go a distance equivalent to

   (a) one light year

   (b) one parsec

   (c) a typical spiral galaxy (22,000 parsec)

7. Currently our space craft can travel approximately 20 kilometers per sec. How long would it take to travel across the Milky way (diameter is about 100,000 LY)?