1. Estimate the average rate of addition of bone on the diaphyseal surface of the tibia, in micrometers/year, as one grew to skeletal maturity. The tibia’s present diameter is 2.5 cm, and assume its diameter was 0.8 cm at birth. Assume that the tibia’s periosteal apposition rate essentially stopped at age 14.
2. Typically a newborn infant’s tibia is about 6.8 cm long. The present length of the tibia is 0.40 m. Estimate the average rate of growth in the tibial growth plates, in mm/year and micrometers/day. Assume that the longitudinal growth of the tibia stops at age 14.