FRP3. At an archeological site, a sample from timber containing 500 g of carbon provide 2690. decays/min. What is the age of the sample? The half-life of carbon is 5730 y. The activity of atmospheric carbon before 1900 is 255 Bq/kg.

FRP4. a) A myopic person sees that her contact lens prescription is -4.00 D. What is her far point? b) After some time, the far point changed to 20.0 cm. What power contact lens (when on the eye) will correct his distant vision?

c) While reading the blackboard with no visual aid, the person's eye has a refractive power of 51.0 D. How far is the board from his eyes?

rKP3 t = 8640.62 years, the age of the semile in years FRP4 a.  $d_0 = 0.25$  module N b. P<sub>lens</sub> = -3.00 D, power of the contact lens when her far point is changed to 20 cm c.  $d_0 = 1$  m, the distance of the board from his eyes

## **Explanation**

FRP3

Given m = 500g, mass of carbon N(t) = 2690 decays/min, decay rate  $T_{1/2} = 5730$  $\lambda = \ln 2/T_{1/2}$ , decay constant

Required t = ? age of the sample in years