

1- Give two problems involved with using an x-ray image to measure bone mineral mass in vivo.

2- Assume a leg has a 1.2 m shaft of bone with an average cross-sectional area of 3 cm^2 ($3 \times 10^{-4} \text{ m}^2$) what is the amount of shortening when all of the body weight of 700 N is supported on this leg? Young's modulus of bone is ($1.8 \times 10^{10} \text{ N/m}^2$).

3-List four functions of bone in the body.

4-What are the major components of bone?

5-What is the function of synovial fluid?