Radius of Relative stiffness $= l = \left[\frac{Eh^3}{12K(1-\mu^2)}\right]^{1/4}$

Given = Modulus of elasticity $= 2.1 \times 10^5 \text{ Kg/cm}^2$

(i) When $K = 3.0 \text{ Kg/cm}^3$

Applying Radius of Relative stiffness formula

$$= \left[\frac{2.1 \times 10^5 \times 15^3}{12 \times 3 \times (1-0.13)^2}\right]^{1/4}$$

$$= 71.41 \text{ cm}$$

(ii) When $K = 7.5 \text{ Kg/cm}^3$

Again using above eqn

$$= \left[\frac{2.1 \times 10^5 \times 15^3}{12 \times 7.5 \times (1-0.13)^2}\right]^{1/4}$$

$$= [10404280.6]^{1/4}$$

$$= 56.794 \text{ cm}$$