

~~Each~~ Each spring extends by x
Total force = F

$$F = k(2x)$$

$$\therefore k = \frac{F}{2x}$$

Compare with $F/x \Rightarrow k$ is halved.

(A)

$$6) \frac{1}{R} = \frac{1}{R_1} + \frac{1}{R_2} \Rightarrow R = \frac{1}{(\frac{1}{R_1} + \frac{1}{R_2})}$$

$$P = \frac{V^2}{R} = V^2 \times \frac{1}{R} = V^2 \left(\frac{1}{R_1} + \frac{1}{R_2} \right)$$

(A)

7) Falls by $\frac{1}{\sqrt{2}}$ every hour because of decay.

Falls by $\frac{1}{\sqrt{2}}$ every hour because of excretion.

\therefore Falls by $\frac{1}{\sqrt{2}} \times \frac{1}{\sqrt{2}} = \frac{1}{2}$ every hour.

(B)