Consider a spring with spring constant k. You cut it exactly in half, creating two new springs. What is the spring constant for either one of these new springs?

1. $4k$
2. $2k$
3. k
4. $k/2$
5. $k/4$

Apply a force F to the single spring with spring constant k and it stretches by Δx.

Consider the single spring to be two half springs. Each stretches by $\Delta x/2$, and each is pulled by the same force F. Each half must have <u>twice</u> the original spring constant: $2k$.