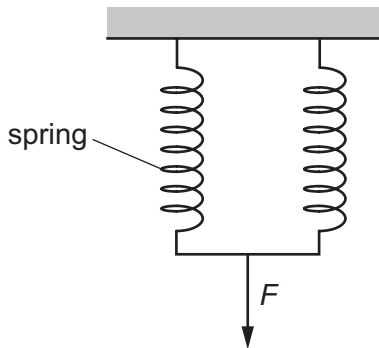**20** A spring has spring constant k. The spring obeys Hooke's law and experiences extension x when a force F is applied to it. The resulting elastic potential energy of the spring is E_P.

The diagram shows two of these springs joined together in parallel and hanging from a fixed beam.

What is the extension and total elastic potential energy of this arrangement when the same force F is applied?

	extension	total elastic potential energy
A	$\frac{1}{2}x$	$\frac{1}{2}E_P$
B	$\frac{1}{2}x$	$\frac{1}{4}E_P$
C	x	$\frac{1}{2}E_P$
D	x	$\frac{1}{4}E_P$