

**24** Two springs P and Q both obey Hooke's law. They have spring constants  $2k$  and  $k$  respectively.

The springs are stretched, separately, by a force that is gradually increased from zero up to a certain maximum value, the same for each spring. The work done in stretching spring P is  $W_P$ , and the work done in stretching spring Q is  $W_Q$ .

How is  $W_P$  related to  $W_Q$ ?

A     $W_P = \frac{1}{4}W_Q$

B     $W_P = \frac{1}{2}W_Q$

C     $W_P = 2W_Q$

D     $W_P = 4W_Q$

**25** Which value is a possible wavelength for radiation in the microwave region of the electromagnetic