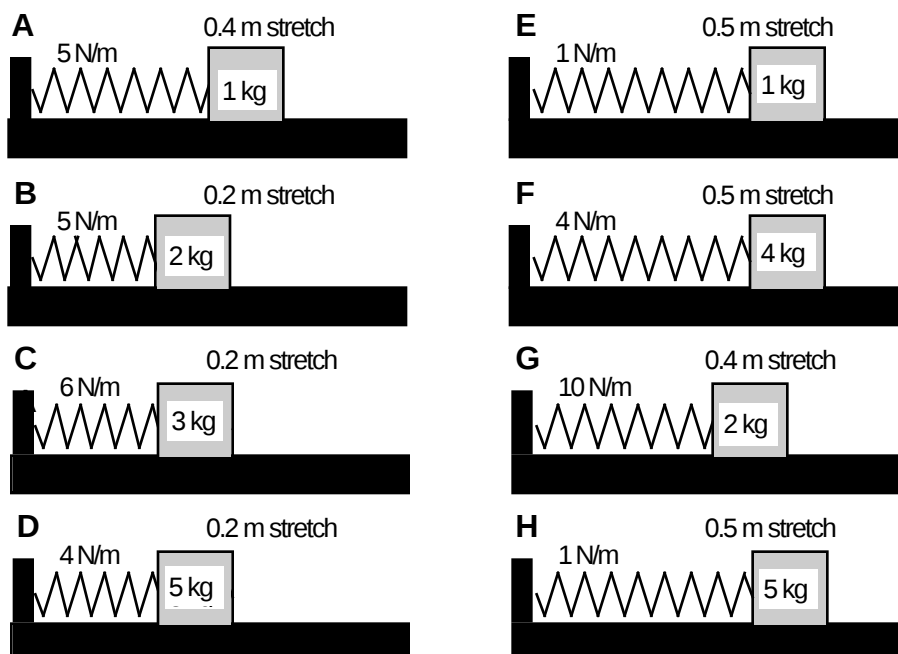


Springs and Masses—Period of Oscillating Mass 97

Each figure below shows a block attached to the end of a spring resting on a frictionless surface. In each figure, the springs are to be stretched to the right by a distance given in the figure and released. The blocks will then proceed to oscillate. The mass is given for each different block, and the force constant is given for each different spring.

Rank the figures from greatest to least on the basis of the period of the vibratory motion. That is, rank the figures on the basis of how long each will take to go through one complete cycle.



Greatest 1____ 2____ 3____ 4____ 5____ 6____ 7____ 8____ Least
t

Or, all of the periods will be the same.

Please carefully explain your reasoning.

How sure were you of your ranking? (circle one)

Basically Guessed

Sure

Very Sure

1 2 3 4 5 6 7 8 9 10

⁹⁷ S. Loucks