

Quiz

A person of mass m bungee jumps from a bridge located a height H above the water. The bungee cord acts like an ideal spring with spring constant k . If the person wants to come to rest just before she reaches the water, what must be the value of k ?

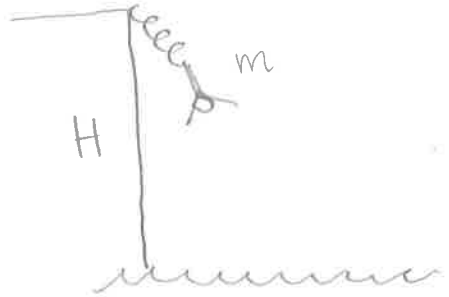
(a) $\frac{mg}{4H}$

(b) $\frac{mg}{2H}$

(c) $\frac{mg}{H}$

(d) $\frac{2mg}{H}$

(e) None of above



Quiz

Two forces act on an object. Force F_1 has magnitude

$F_1(x) = \alpha x$ and attracts objects toward the origin, while

force F_2 has magnitude $F_2(x) = \beta x^5$ and repels objects from

the origin. What is the combined potential energy?

(a) $\frac{1}{2} \alpha x^2 + \frac{1}{6} \beta x^6$

(b) $-\frac{1}{2} \alpha x^2 + \frac{1}{6} \beta x^6$

(c) $\frac{1}{2} \alpha x^2 - \frac{1}{6} \beta x^6$

(d) $-\frac{1}{2} \alpha x^2 - \frac{1}{6} \beta x^6$

(e) None of above