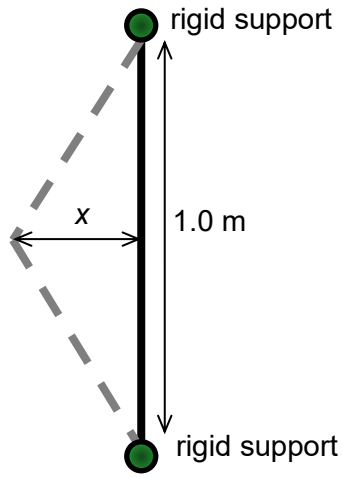
**7** A student builds a launcher using an elastic cord of negligible mass and natural length of 1.0 m attached to two rigid supports.




Assuming that the elastic cord obeys Hooke's Law with a spring constant of 80 N $m^{-1}$ and that the cord is pulled at its midpoint, what is the minimum draw length *x* needed such that a 200 g water balloon may be propelled with a speed of 10 m $s^{-1}$?

**A** 0.50 m **B** 0.56 m **C** 0.75 m **D** 1.5 m