## Example

A bowling ball is released from position $A$ with an initial velocity of $3 \mathrm{~m} / \mathrm{s}$. The ball swings in a vertical plane. At the bottom position, the cord strikes the fixed bar at $B$, and continues to swing. Calculate the velocity of the ball as it passes position $C$.


## Example

A 10-kg slider is originally at rest in position $A$ where the spring is stretched a distance of 0.6 m . (The attached spring has a stiffness [i.e., $k$ ] of $60 \mathrm{~N} / \mathrm{m}$.) A constant $250-\mathrm{N}$ force is then applied to the pulley and the slider moves with negligible friction in the cylinder as shown. Calculate the velocity of the slider as it passes point $C$.


