Potential Energy in Spring

- Hooke's Law force is Conservative
  - $F = -kx$
  - $W = -\frac{1}{2}kx^2$

Force

work

x
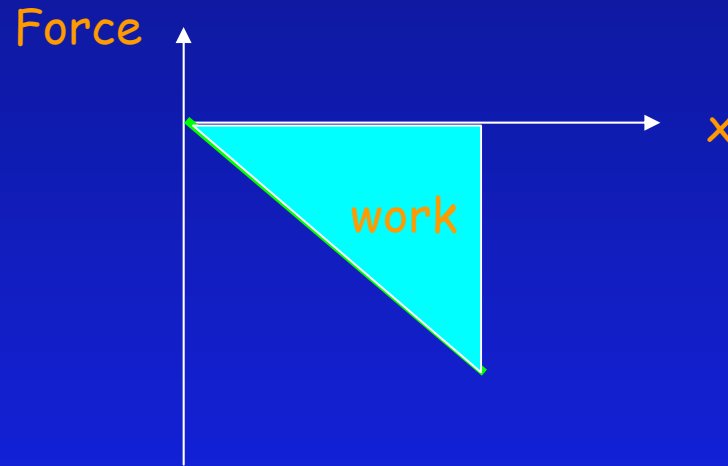
  - Work done only depends on initial and final position

  - Define Potential Energy $U_{spring} = \frac{1}{2}kx^2$