

Hooke's Law:

— Tension $\propto x$
 $\hookrightarrow T \propto x$
 $\hookrightarrow T = kx$

— This constant k depends on:

\hookrightarrow The unstretched (natural) length of the string or spring (L)

\hookrightarrow The Modulus of elasticity (λ)

— $k = \lambda/L \Rightarrow T = \frac{\lambda x}{L}$

— This is what is called Hooke's Law

— Modulus of elasticity is often also referred to as Young's Modulus, especially in physics

