Projectile Motion:



Relative and Circular Motion:



Newton's Laws:



Free Body Diagrams:



Springs and Friction:

Figure 5.29 A spring exerts its force proportional to a displacement, whether it is compressed or stretched. (a) The spring is in a relaxed position and exerts no force on the block. (b) The spring is compressed by displacement Δ**𝐱⃗** 1 of the object and exerts restoring force −*𝑘*Δ**𝐱⃗** 1. (c) The spring is stretched by displacement Δ**𝐱⃗** 2 of the object and exerts restoring force −*𝑘*Δ**𝐱⃗** 2.

Work-Energy Theorem:

