6.1: Work

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Def: Work is the change in kinetic energy of a system. It is defined by $W = \vec{F} \cdot \vec{d}$, the dot product of force and displacement.

Work is measured in joules (J), defined as Newtons $\cdot$ meters.

Work can be positive if the force is acting in the direction of displacement, zero, if the force is perpendicular to displacement (carrying a briefcase), or negative, if force is opposite displacement (lowering a barbell).

Total work is the sum of all the work done by each individual force, or the work done by the net force.