

31. The power associated with force \vec{F} is given by $P = \vec{F} \cdot \vec{v}$, where \vec{v} is the velocity of the object on which the force acts. Thus,

$$P = \vec{F} \cdot \vec{v} = Fv \cos \phi = (122 \text{ N})(5.0 \text{ m/s}) \cos 37^\circ = 490 \text{ W} .$$