

## Exercise 5

A constant force  $\mathbf{F}$  acts on a body moving with a velocity  $\mathbf{v}$ , which is not necessarily collinear with  $\mathbf{F}$ . Show that the rate at which  $\mathbf{F}$  does work on the body is  $W = (\mathbf{F} \cdot \mathbf{v})$ .