

## 6.4 Scaling Vectors

566.  $\vec{w} = \lambda \vec{u}$

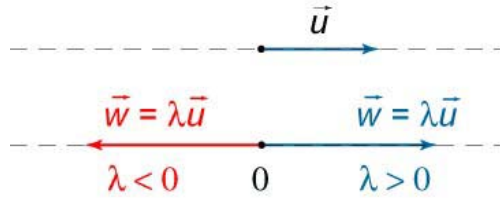


Figure 81.

567.  $|\vec{w}| = |\lambda| \cdot |\vec{u}|$

568.  $\lambda \vec{u} = (\lambda X, \lambda Y, \lambda Z)$

569.  $\lambda \vec{u} = \vec{u} \lambda$

570.  $(\lambda + \mu) \vec{u} = \lambda \vec{u} + \mu \vec{u}$

571.  $\lambda(\mu \vec{u}) = \mu(\lambda \vec{u}) = (\lambda \mu) \vec{u}$

572.  $\lambda(\vec{u} + \vec{v}) = \lambda \vec{u} + \lambda \vec{v}$