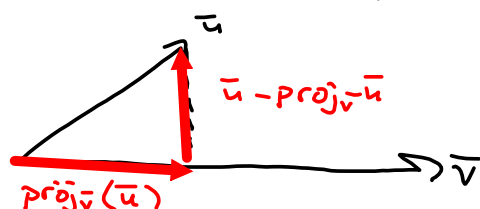


Orthogonal is a fancy word for "at right angles." The dot product of orthogonal vectors is zero.

$$\text{proj}_{\vec{v}} \vec{u} = \frac{\vec{u} \cdot \vec{v}}{\|\vec{v}\|^2} \vec{v}$$

$$\|\vec{v}\|^2 = \vec{v} \cdot \vec{v}$$

$$\vec{u} = \text{proj}_{\vec{v}} \vec{u} + (\vec{u} - \text{proj}_{\vec{v}} \vec{u})$$



3.4 due today

4.1 due Wednesday

4.2 due Friday