

① Find the part of $\langle 0, 0, 14 \rangle$ HW4
perpendicular to $\langle -1, -2, 3 \rangle$.

② Given $\vec{u} = \langle 1, 2 \rangle$ and $\vec{v} = \langle 3, 4 \rangle$,
find $\text{proj}_{\vec{u}} \vec{v}$ and $\text{proj}_{\vec{v}} \vec{u}$. Then

sketch (and label) two vector addition
triangles, one for each equation below:

$$\text{proj}_{\vec{u}} \vec{v} + \text{orth}_{\vec{u}} \vec{v} = \vec{v}$$

$$\text{proj}_{\vec{v}} \vec{u} + \text{orth}_{\vec{v}} \vec{u} = \vec{u}$$