

Let  $\vec{\mathbf{a}} = \langle 3, 5 \rangle$ ,  $\vec{\mathbf{b}} = \langle 7, 2 \rangle$ , and  $\vec{\mathbf{v}} = \langle 1, 3, -2 \rangle$ .

1. Find the projection of  $\vec{\mathbf{a}}$  onto  $\vec{\mathbf{b}}$
2. Find two vectors perpendicular to  $\vec{\mathbf{b}}$ .
3. Find three vectors perpendicular to  $\vec{\mathbf{v}}$ .