

- ① There are two unit vectors perpendicular to  $\langle 3, 4 \rangle$ . Find them.
- ② If  $\langle 1, 2, 4 \rangle \perp \langle 5, 4, x \rangle$ , what is  $x$ ?
- ③ If  $|\vec{a}| = 8$ ,  $\vec{a} \cdot \vec{b} = 5$ , and  $\angle(\vec{a}, \vec{b}) = \pi/6$ , then what is  $|\vec{b}|$ ?
- ④ If  $\angle(\vec{c}, \vec{d}) = \frac{2\pi}{3}$ , what can we say about  $\vec{c} \cdot \vec{d}$ ?
- ⑤ Compute  $\angle(\langle 3, 4, 5 \rangle, \langle 4, 5, -6 \rangle)$  in radians to at least six significant figures.