

VD 6.3.2

| \vec{v} | \vec{w} | \vec{u} | linear combination of \vec{u} | $\ \vec{u}\ $ | θ_u |
|--|--|-------------------------------|--|------------------------|---|
| $-4i$ | $\langle 1, 2 \rangle$ | $3v - 5w$ | $-17i - 10j$ | $\sqrt{389}$ | $\pi + \tan^{-1}\left(\frac{10}{17}\right)$ or 210.46° |
| $\langle -2, 2 \rangle$ | $\langle 3, 1 \rangle$ | $v + 2w$ | $4i + 4j$ | $4\sqrt{2}$ | $\frac{\pi}{4}$ or 45° |
| $\ \vec{v}\ = 4,$ $\theta_v = 150^\circ$ | $2j$ | $-v - w$ | $2\sqrt{3}i - 4j$ | $2\sqrt{7}$ | $2\pi + \tan^{-1}\left(-\frac{2\sqrt{3}}{3}\right)$ or 310.89° |
| $\ \vec{v}\ = 2,$ $\theta_v = 60^\circ$ | $\ \vec{w}\ = 3,$ $\theta_w = 240^\circ$ | $2v + 3w$ | $-\frac{5}{2}i - \frac{5}{2}\sqrt{3}j$ | 5 | $\frac{4\pi}{3}$ or 240° |
| $-2i + j$ | $\ \vec{w}\ = 4\sqrt{2},$ $\theta_w = 135^\circ$ | $-2i + j$ | $2i - 3j$ | $\sqrt{13}$ | $2\pi + \tan^{-1}\left(-\frac{3}{2}\right)$ or 303.7° |
| $4i + 2j$ | $3i - 6j$ | $\frac{3}{2}v - \frac{1}{6}w$ | $\frac{11}{2}i + 4j$ | $\frac{\sqrt{185}}{2}$ | $\tan^{-1}\left(\frac{8}{11}\right)$ or 36.03° |