Homework 13 Math 48C Mitchell Schoenbrun
9.3 P. 596 #5-8, 15-20, 25, 26

5. $u \cdot v = 2$ $\theta = \cos^{-1}\left(\frac{u \cdot v}{\|u\|\|v\|}\right) = \cos^{-1}\left(\frac{2}{2\sqrt{2}}\right) = 45^\circ$	6. $u \cdot v = 0$ $\theta = \cos^{-1}(0) = 90^\circ$
7. $u \cdot v = 13$ $\theta = \cos^{-1}\left(\frac{13}{\sqrt{53 \cdot 10}}\right) = 55.6^\circ$	8. $u \cdot v = -12$ $\theta = \cos^{-1}\left(\frac{-12}{\sqrt{72 \cdot 2}}\right) = 180^\circ$
15. $u \cdot v = 0$ perpendicular	16. $u \cdot v = 0$ perpendicular
17. $u \cdot v = 4$ not perpendicular	18. $u \cdot v = 0$ perpendicular
19. $u \cdot v = 0$ perpendicular	20. $u \cdot v = -4$ not perpendicular
25. $\frac{u \cdot v}{\|v\|} = \frac{-12}{5}$	26. $\frac{u \cdot v}{\|v\|} = \frac{\sqrt{2}}{1} = \sqrt{2}$