

# Advanced Math

pg 400

44a) $\sin 300^\circ = -\frac{\sqrt{3}}{2}$	46) $\sin(-405^\circ) = -\frac{1}{\sqrt{2}}$	48) $\sin \frac{\pi}{4} = \frac{1}{\sqrt{2}}$	50) $\sin \frac{\pi}{2} = 1$	52) $\sin \frac{10\pi}{3} = -\frac{\sqrt{3}}{2}$
$\cos 300^\circ = \frac{1}{2}$	$\cos(-405^\circ) = \frac{1}{\sqrt{2}}$	$\cos \frac{\pi}{4} = \frac{1}{\sqrt{2}}$	$\cos \frac{\pi}{2} = 0$	$\cos \frac{10\pi}{3} = -\frac{1}{2}$
$\tan 300^\circ = -\sqrt{3}$	$\tan(-405^\circ) = -1$	$\tan \frac{\pi}{4} = 1$	$\tan \frac{\pi}{2} = \text{undefined}$	$\tan \frac{10\pi}{3} = \sqrt{3}$
b) $\sin 330^\circ = -\frac{1}{2}$	b) $\sin(-120^\circ) = -\frac{\sqrt{3}}{2}$	b) $\sin \frac{5\pi}{4} = -\frac{1}{\sqrt{2}}$	b) $\sin \frac{\pi}{2} = 1$	b) $\sin \frac{12\pi}{3} = -\frac{\sqrt{3}}{2}$
$\cos 330^\circ = \frac{\sqrt{3}}{2}$	$\cos(-120^\circ) = -\frac{1}{2}$	$\cos \frac{5\pi}{4} = -\frac{1}{\sqrt{2}}$	$\cos \frac{\pi}{2} = 0$	$\cos \frac{12\pi}{3} = \frac{1}{2}$
$\tan 330^\circ = -\frac{1}{\sqrt{3}}$	$\tan(-120^\circ) = \sqrt{3}$	$\tan \frac{5\pi}{4} = 1$	$\tan \frac{\pi}{2} = \text{undefined}$	$\tan \frac{12\pi}{3} = -\sqrt{3}$

54a) -1.4142	56a) -2.0000	58a) 0.2245	60a) -0.3640	62a) -0.6052
b) -1.4142	b) 2.0000	b) -4.4552	b) -0.3640	b) -0.6077

64a) $45^\circ$ or $\frac{\pi}{4}$	66a) $60^\circ$ or $\frac{\pi}{3}$	68a) $60^\circ$ or $\frac{\pi}{3}$	70a) $29.00^\circ$	72a) .018	74a) 0.175
$315^\circ$ or $\frac{7\pi}{4}$	$300^\circ$ or $\frac{5\pi}{3}$	$120^\circ$ or $\frac{2\pi}{3}$	$331.00^\circ$	3.124	3.316
b) $135^\circ$ or $\frac{3\pi}{4}$	b) $120^\circ$ or $\frac{2\pi}{3}$	b) $240^\circ$ or $\frac{4\pi}{3}$	b) $104.00^\circ$	b) 3.875	b) 2.479
$225^\circ$ or $\frac{5\pi}{4}$	$240^\circ$ or $\frac{4\pi}{3}$	$300^\circ$ or $\frac{5\pi}{3}$	$256.00^\circ$	5.550	5.620

76)  $\sin \theta = \frac{1}{\sqrt{10}}$   
 78)  $\cot \theta = -\sqrt{3}$   
 80)  $\tan \theta = \frac{\sqrt{65}}{4}$

83 a) 12 mi  
 b) 6 mi  
 c) 6.9 mi