

7. $\sin 150^\circ = \sin 30^\circ = \frac{1}{2}$
9. $\sin 135^\circ = \sin 45^\circ = \frac{1}{\sqrt{2}} = \frac{\sqrt{2}}{2}$
11. $\sin(-60^\circ) = -\sin 60^\circ = -\frac{\sqrt{3}}{2}$
13. $\csc(-630^\circ) = \csc 90^\circ = \frac{1}{\sin 90^\circ} = 1$
15. $\cos 570^\circ = -\cos 30^\circ = -\frac{\sqrt{3}}{2}$
17. $\tan 750^\circ = \tan 30^\circ = \frac{1}{\sqrt{3}} = \frac{\sqrt{3}}{3}$
19. $\sin\left(\frac{2\pi}{3}\right) = \sin\left(\frac{\pi}{3}\right) = \frac{\sqrt{3}}{2}$
21. $\sin\left(\frac{3\pi}{2}\right) = -\sin\left(\frac{\pi}{2}\right) = -1$
23. $\cos\left(-\frac{7\pi}{3}\right) = \cos\left(\frac{\pi}{3}\right) = \frac{1}{2}$
25. $\sec\left(\frac{17\pi}{3}\right) = \sec\left(\frac{\pi}{3}\right) = \frac{1}{\cos\left(\frac{\pi}{3}\right)} = 2$
27. $\cot\left(-\frac{\pi}{4}\right) = -\cot\left(\frac{\pi}{4}\right) = \frac{-1}{\tan\left(\frac{\pi}{4}\right)} = -1$
29. $\tan\left(\frac{5\pi}{2}\right) = \tan\left(\frac{\pi}{2}\right)$ which is undefined
31. Since $\sin \theta < 0$ and $\cos \theta < 0$, we have θ in quadrant III.
33. $\sec \theta > 0 \Rightarrow \cos \theta > 0$. Also $\tan \theta < 0 \Rightarrow \frac{\sin \theta}{\cos \theta} < 0 \Leftrightarrow \sin \theta < 0$ (since $\cos \theta > 0$).
Since $\sin \theta < 0$ and $\cos \theta > 0$, we get θ is in quadrant IV.
41. $\sin \theta = \frac{3}{5}$. Then $x = -\sqrt{5^2 - 3^2} = -\sqrt{16} = -4$, since θ in quadrant II. Thus, $\cos \theta = -\frac{4}{5}$,
 $\tan \theta = -\frac{3}{4}$, $\csc \theta = \frac{5}{3}$, $\sec \theta = -\frac{5}{4}$, $\cot \theta = -\frac{4}{3}$.