VD 5.3.1

Solve the following trigonometric equations

1. $\csc^2 x - 2 = 0$	$x = \pm\frac{\pi}{4} + k\pi$
2. $\sec x \csc x = 2\csc x$	$x = \pm\frac{\pi}{3} + 2k\pi$
3. $\sin^3 x = \sin x$	$x = \frac{\pi}{2}k$
4. $3\sec^2 x - 4 = 0$	$x = \pm\frac{\pi}{6} + k\pi$
5. $3\cot^2 x = 1$	$x = \pm\frac{\pi}{3} + k\pi$
6. $\cos x(2\cos x + 1) = 0$	$x = \frac{2\pi}{3} + 2k\pi, x = \frac{4\pi}{3} + 2k\pi, x = \frac{\pi}{2} + k\pi$
7. $\cot x + \csc x = 0$	no solution