SOLVE EACH EQUATION. FOR PROBLEMS #1 AND #2, FIND THE GENERAL SOLUTION. FOR #3 - #8, FIND ALL SOLUTIONS IN THE INTERVAL $[0,2\pi)$.

1. $2\cos(x)\tan(x)+\tan(x)=0$
2. $2\sin(x)\cos^2(x)=\sin(x)$
3. $3\sin(x)\tan^2(x)=\sin(x)$
4. $3\sec^2(x)-4=0$
5. $\tan(2x)+1=0$
6. $-2\cos^2(x)-3\sin(x)+3=0$
   Hint: Substitute for $\cos^2(x)$.
7. $\sqrt{2}\ \sin(x)\sec(x)+\sec(x)=0$
8. $\cos(3x)+1=0$

I. SOLVE EACH EQUATION IN THE INTERVAL $[0,2\pi)$.

1. $2\cos^2(x)=\cos(x)+1$
2. $\cos^2(x)-\sin^2(x)=0$
   Hint: Pythagoras substitution.
3. $5\cos(x)+7=5$
4. $\sqrt{2}\cos(4x)=-1$
5. $4\sin^2(2x)=3$
6. $\sin(2x)+\cos(x)=0$
7. $6\sin^2(x)-\sin(x)-2=0$
8. $3\cos(x)\tan^2(x)-\cos(x)=0$