Trig identities.

1. $\sin^2(x) = 1 - \cos^2(x)$

2. $\sec^{(}x) = 1 + \tan^2(x)$

3. $\tan^2(x) = \sec^2(x) - 1$

4. $\sin(2x) = 2\sin(x)\cos(x)$

5. $\cos(2x) = \cos^2(x) - \sin^2(x)$

6. $\cos(2x) = \cos^2(x) - \sin^2(x) = \cos^2(x) - (1 - \cos^2(x)) = 2\cos^2(x) - 1$

7. $\cos^2(x) = \frac{1}{2}(1 + \cos(2x))$

8. $\sin^2(x) = \frac{1}{2}(1 - \cos(2x))$