MATH 2A/5A Prep: Trigonometric Functions

1. Express $\cos^2(x)$ in terms of $\cos(2x)$.

2. Express $\sin^4(x)$ in the form $a + b\cos(2x) + c\cos(4x)$, where a, b, c are real numbers.

3. Use intevals to describe the solution to the inequality $\tan(x) \geq 0$.