

Homework 6

Name:

Date: June 3, 2013

P 1. Derive the Pythagorean identities from

$$\sin^2 \theta + \cos^2 \theta = 1$$

P 2. Derive the Sum-and-Difference formulas from

$$\sin(u + v) = \sin u \cos v + \cos u \sin v$$

P 3. Derive the Double-Angle Formulas from either the Pythagorean identities or the Sum-and-Difference Formulas.

P 4. Derive the Sum-to-Product Formulas from

$$\sin(u + v) = \sin u \cos v + \cos u \sin v$$

P 5. Derive the Product-to-Sum Formulas from

$$\sin(u + v) = \sin u \cos v + \cos u \sin v$$

P 6. Derive the Power-Reducing formulas from the Double-Angle Formulas