

5.5 Multiple-Angle and Product-to-Sum Formulas

Name:

Date: May 29, 2013

P 19. Find the exact solutions of

$$\sin 2x - \sin x = 0$$

on $[0, 2\pi)$.

P 26. Find the exact solutions of

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

P 37. Find the exact values of $\sin 2u$, $\cos 2u$, and $\tan 2u$ using the double angle formulas.

$$\sin u = \frac{-3}{5}$$

and $\frac{3\pi}{2} < u < 2\pi$.

P 70. Let

$$\cot u = 3 \text{ and } \pi < u < \frac{3\pi}{2}.$$

(a) Determine the quadrant in which $u/2$ lies

(b) Find the exact values of $\sin(u/2)$, $\cos(u/2)$, and $\tan(u/2)$.

P 77. Find all solutions of

$$\sin \frac{x}{2} + \cos x = 0$$

on the interval $[-2\pi, 0)$.

P 79. Find all solutions of

$$\cos \frac{x}{2} - \sin x = 0$$

on the interval $[-\pi, \pi]$.

P 103. Find all solutions to

$$\sin 6x + \sin 2x = 0$$

on $[0, 2\pi)$.

P 105. Find all solutions to

$$\frac{\cos 2x}{\sin 3x - \sin x} - 1 = 0$$

on $[0, 2\pi)$.