Directions: In order to receive full or partial credit, show all work below. Use the back of this page if you need more room to justify your answer.

Problem 1. (8 pts) Evaluate each of the following using unit circle and trig identities.

$$(a)\cos(45^\circ)-\sin(60^\circ)$$

(b)
$$\tan\left(\frac{2\pi}{3}\right)$$

$$(a)\cos(45^{\circ}) - \sin(60^{\circ}) \qquad (b)\tan\left(\frac{2\pi}{3}\right) \qquad (c)4 + 3\sin^2(25^{\circ}) + 3\cos^2(-25^{\circ}) \qquad (d)\sin\left(\frac{-3\pi}{4}\right) + \sec(\pi)$$

$$(d)\sin\left(\frac{-3\pi}{4}\right) + \sec(\pi$$

Problem 2. (8 pts) Sketch the graphs for the following functions. Include at least two periods and enough labels for your graph to be fully understood.

$$(a) \ f(x) = 3\sin\left(x - \frac{\pi}{2}\right) + 2$$

$$(b) \ g(x) = 2\cos(\pi x)$$

NAME & SECTION: