Quiz 1

Spring 2015 **Your name:**

Math 0220 **Your TA's name:**

No calculators, no notes, no books are permitted.

SHOW ALL WORK (no work = no credit). Write neatly. Simplify your answers.

1. (a) [2 points]   Calculate $\dfrac{8}{45} - \dfrac{1}{12}$

(b) [2 points]   Simplify and find exact value of $2\sqrt{27} - 3\sqrt{12}$

2. (a) [2 points] Solve the inequality $5^{2x-6} < 25$

(b) [2 points] Solve the equation $5 - x^{\frac{2}{3}} = 1$

3. (a) [2 points]   Prove the identity $(\cos x - \sin x)^2 = 1 - \sin 2x$

(b) [2 points]   Solve the equation $\sin^4 4x - \cos^4 4x = 1$.   Find all solutions.