Quiz 1

Fall 2017 **Name:**

Math 0220 **TA's name:**

No calculators, no notes, no books. Show all your work (no work = no credit). Write neatly.

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1. Simplify expressions

   (a) (3 points) $\dfrac{2^7\, x^3\, \sqrt[4]{x}}{32\, x^{5/2}}$

   (b) (3 points) $\dfrac{x^2 - 5x + 6}{|x - 3|}$

   (c) (3 points) $\dfrac{2\sin 2x}{4\sin x}$

2. (3 points)   Find the volume V of the cone with radius of the base $r = 3$ cm and hight of $h = 4$ cm.

3. (3 points)   Solve the equation $\sin 2x = -\frac{1}{2}$,   if $\frac{3}{4}\pi \leq x \leq \pi$.

bonus problem [3 points extra]   Simplify the expression $\dfrac{(\sqrt{x}+3)(x-6\sqrt{x}+9)}{9-x}$