MATH 220: CALCULUS I
WORKSHEET 1
JANUARY 15, 2013

1. Determine if the following functions are even, odd, or neither.
   (a) $f(x) = x^6 \sin x$

   (b) $g(x) = \sin x \tan^3 x$

   (c) $h(x) = (\sin x + \cos x)^2$

2. Suppose $f(x) = \dfrac{1}{\sqrt{5-x}}$, and $g(x) = \sqrt{x-2}$. For each composite function, determine its domain.
   (a) $f \circ f$

   (b) $f \circ g$

   (c) $g \circ f$

   (d) $g \circ g$

3. Suppose $f(x)$ is an even function and $g(x) = (f(x) + 3)^5$.
   Is $g(x)$ even, odd, or neither?