MATH 170 – Section 004 – Quiz 1

You may work with other class members on this quiz, but you may *not* receive assistance from people not in MATH 170 (Section 004). You must show all of your work to receive full credit. Do all your work on other sheets of paper and be sure to staple all the pieces of paper together or YOU WILL GET A 'ZERO' ON THE QUIZ. Do not use decimal approximations unless asked to do so. Your work on this quiz must be handed in by Tuesday, 21 January 2003 at 11:40 a.m. GOOD LUCK!

1) Determine the domain of

a) $f(x) = \dfrac{-5}{x^3 - x}$

b) $g(x) = \dfrac{1}{\sqrt{5 - 3x}}$

2) Prove that the product of two odd functions is an even function.

3) Give an example of a polynomial that is not a rational function or explain why no such thing can exist.

4) Give an example of an odd function whose domain is $(-\infty, \infty)$ that is decreasing on its entire domain.

5) Following the model given in class, sketch the graph of

$$f(x) = -x^2 + 4x - 8$$

6) Write

$$Q(x) = \cos^3(x - 5)$$

as the composition of three simpler functions.