Name _____

Homework 1
Section 1.1

1. (6) Use the function $g(x) = \sqrt{64 - x^2}$ to evaluate and simplify:

   (a) $g(0)$

   (b) $g(-3)$

   (c) $g(10)$

   (d) $g(\sqrt{15})$

   (e) $g(8)$

   (f) $g(3t)$

2. (4) Determine the zero(s) of the function $Y(p) = \dfrac{(p^2 - 6)(3p - 2)}{p^2 + 3p - 4}$.

3. (7) Evaluate and simplify (i.e. no compound fractions) each of the following expressions, given the function
$T(x) = \dfrac{x+1}{2x}$.

(a) $T(3)$

(c) $T\left(\frac{x}{2}\right)$

(b) $T(x+1)$

(d) $T(x^2-1)$

4. (3) Determine the domain of the function $q(x) = \dfrac{x^2+4x-12}{\sqrt{2x+4}}$. Write your answer in interval notation.