Functions and Functional Notation - Worksheet

NAME:
DATE:

1. Determine whether the equation defines y as a function of x or defines x as a function of y or both.
$$y^2 = 5x - 4$$

2. Find an equation that expresses the area of a square as a function of its side length s.

3. $g(x) = 1 - 3x^3$, find

   (a) $g(0)$
   (b) $g(-2)$
   (c) $g(\frac{1}{2})$

4. If $f(x) = x^2 - x + 2$ and $h \neq 0$, find

   (a) $f(x + h) - f(x)$

   (b) $\dfrac{f(x + h) - f(x)}{h}$

5. Find the domain of the following functions

   (a) $k(x) = |x| - 1$

   (b) $q(x) = \dfrac{1}{\sqrt{2x - 1}}$

   (c) $k(x) = \dfrac{1}{x^2 - 4}$