4. [13 points] Consider the following functions

x	-2	-1	0	1	2	3
$p(x)$	0	3	2	1	-4	-2

$k(x) = x^2 - x$

$y=g(x)$
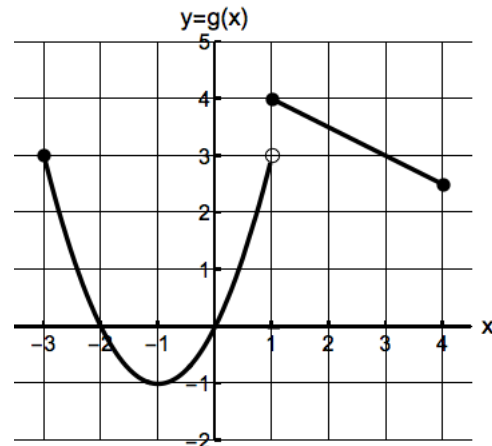
a. [6 points] Find the values of the following quantities. If any of the quantities is not defined, write "UNDEFINED". Simplify your answers.

i) $k(-4)=$ _____

ii) $(p(2))^{-1}=$ _____

iii) $(2g(1)+1)^2=$ _____

iv) $g(k(2))=$ _____

b. [2 points] Find an expression for $k(t+1)$ in terms of only the variable t. You do not need to simplify it.

$$k(t+1) = \underline{\hspace{6cm}}$$

c. [5 points] Find all the solutions to the following equations. Your answers must be exact. If an equation has no solution, write "No solution". Show all your work.

i) $k(z) = 0$.

$$z = \underline{\hspace{4cm}}$$

ii) $p(g(t)) = -2$

$$t = \underline{\hspace{4cm}}$$