8.(1) $f(x) = 1 - 2x^2$, $g(x) = x + 1$, $(f \circ f)(x) = 3x^2 - 1$

Given:

$a(x) = x^2$
$b(x) = |x|
$c(x) = 3x - 1$

Express 13, 14, and 15 as one of the compositions:

$a \circ a, a \circ b, a \circ c, b \circ a, b \circ b, b \circ c, c \circ a, c \circ b, c \circ c.$

* $3|x| - 1 = 3b(x) - 1 = c(b(x)) = c \circ b$

13(1). $(3x - 1)^2$

14(1). $|3x - 1|$

15(1). $3x^2 - 1$

16(2). Write $G(x) = G(x) = \frac{1}{1 + x^4}$ as a composition of two simpler functions, $g(x), f(x)$, which have at most 4 symbols.

$G(x) = f(g(x))$ where

$g(x) = \_\_\_\_\_\_\_\_\_\_\_\_$

$f(x) = \_\_\_\_\_\_\_\_\_\_\_$