1) Let $f(x) = x^4$ and $g(x) = 3x + 2$. Find the composition $(f \circ g)(x)$.

$$(f \circ g)(x) = f(g(x)) = f(3x + 2) = (3x + 2)^4$$

2) Let F be the relation given by $x^4 + y^2 = 6$ and G be the relation given by $y - 3x = 2$. Find the composition $F \circ G$.

First we need to figure out how x relates to y via G:
$$y = 3x + 2$$

Now plug this into F for as x:
$$(3x + 2)^4 + y^2 = 6$$

This is the equation that determines $F \circ G$.