**8** The function f is defined by $f(x) = 3x + 1$ for $x \leqslant a$, where $a$ is a constant. The function g is defined by $g(x) = -1 - x^2$ for $x \leqslant -1$.

**(i)** Find the largest value of $a$ for which the composite function gf can be formed. [2]

For the case where $a = -1$,

**(ii)** solve the equation $fg(x) + 14 = 0$, [3]

**(iii)** find the set of values of $x$ which satisfy the inequality $gf(x) \leqslant -50$. [4]