8 The function f is defined by $f(x) = \dfrac{1}{x+1} + \dfrac{1}{(x+1)^2}$ for $x > -1$.

   (i) Find $f'(x)$. [3]

   (ii) State, with a reason, whether f is an increasing function, a decreasing function or neither. [1]

The function g is defined by $g(x) = \dfrac{1}{x+1} + \dfrac{1}{(x+1)^2}$ for $x < -1$.

   (iii) Find the coordinates of the stationary point on the curve $y = g(x)$. [4]