1. The function f is given by

$$f(x) = \ln(2x - 5), \qquad x > 2.5$$

(a) Find $f^{-1}(x)$.

(2)

The function g has domain $x > 2$ and

$$fg(x) = \ln\left(\frac{x + 10}{x - 2}\right), \qquad x > 2$$

(b) Find $g(x)$ and simplify your answer.

(3)