

**5** Functions  $f$  and  $g$  are defined by

$$f(x) = 4x - 2, \quad \text{for } x \in \mathbb{R},$$

$$g(x) = \frac{4}{x+1}, \quad \text{for } x \in \mathbb{R}, x \neq -1.$$

(a) Find the value of  $fg(7)$ .

[1]

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(b) Find the values of  $x$  for which  $f^{-1}(x) = g^{-1}(x)$ .

[5]

This image shows a blank sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.