

2 The function $f(x) = \sqrt{x}$ is defined on the domain $x \geq 0$.

The function $g(x) = 25 - x^2$ is defined on the domain \mathbb{R} .

(a) Write down an expression for $fg(x)$. **[1]**

(b) (i) Find the domain of $fg(x)$. **[3]**

(ii) Find the range of $fg(x)$. **[2]**