5.1) (5) Given: $f(x) = \phi(x)\theta + b$

$\theta = \left(0, \frac{1}{2}, \frac{1}{2}\right)$, $b = -1$ {from 5.1(4) & 5.1(3)}

$\phi(x) = [1, \sqrt{2}x, x^2]$

Now, putting all these values —

$$f(x) = (1, \sqrt{2}x, x^2) \cdot \left(0, \frac{1}{2}, \frac{1}{2}\right) - 1$$

$$\boxed{f(x) = \frac{1}{\sqrt{2}}x + \frac{1}{2}x^2 - 1}$$

Therefore $f(x)$ is expressed as an explicit function of x.