

7.

$$g(x) = 4x^3 + ax^2 + 4x + b$$

where a and b are constants.

Given that

- $(2x + 1)$ is a factor of $g(x)$
- the curve with equation $y = g(x)$ has a point of inflection at $x = \frac{1}{6}$

(a) find the value of a and the value of b

(5)

(b) Show that there are no stationary points on the curve with equation $y = g(x)$.

(2)