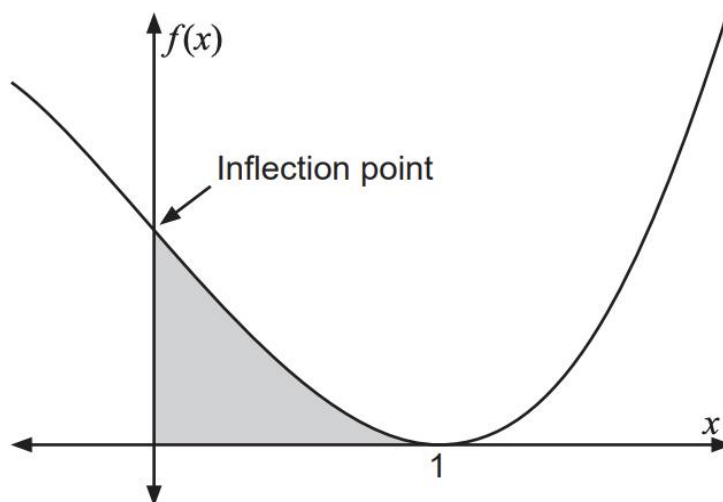


**Question 3****(7 marks)**

The graph of the cubic function  $f(x) = ax^3 + bx^2 + cx + d$  is shown below. A turning point is located at  $(1, 0)$  and the shaded region shown on the graph has an area of  $\frac{3}{2}$  units<sup>2</sup>.



Use the above information to determine the values of  $a$ ,  $b$ ,  $c$  and  $d$ .