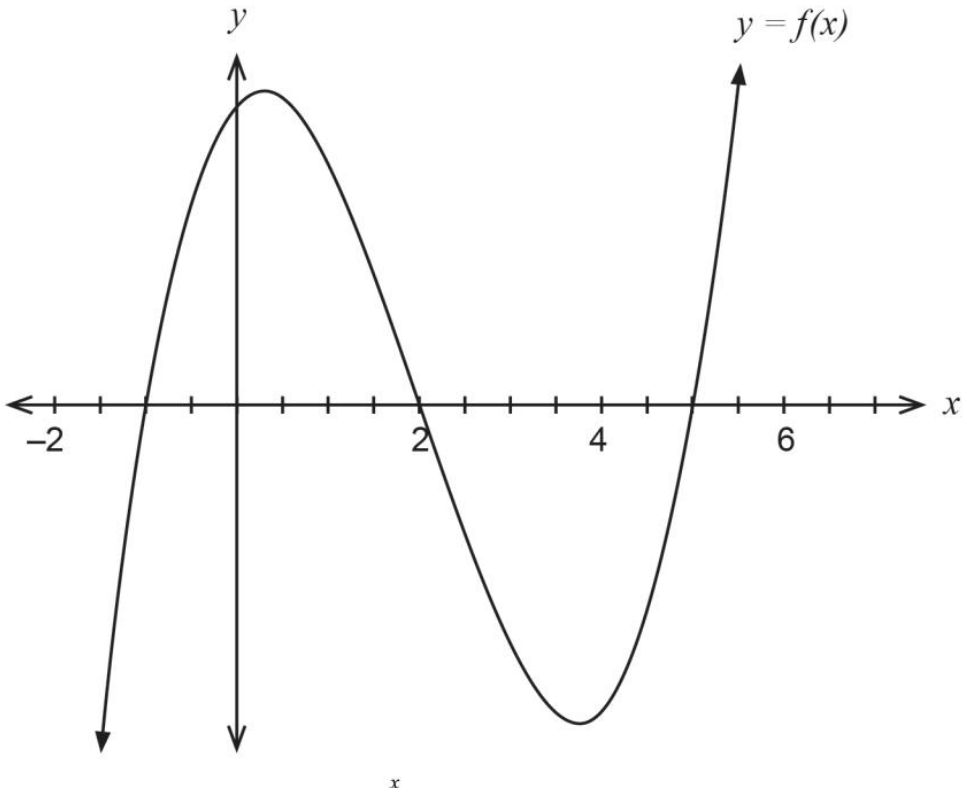
Question 5 **(6 marks)**

Consider the graph of $y = f(x)$ which is drawn below.



x

Let $A(x)$ be defined by the integral $A(x) = \int_{-1}^{x} f(t)\,dt$ for $-1 \leq x \leq 6$.

It is known that $A(2) = 15$, $A(5) = 0$ and $A(6) = 8$.

Sketch on the axes below the function $A(x)$ for $-1 \leq x \leq 6$ labelling clearly key features such as x intercepts, turning points and inflection points if any.