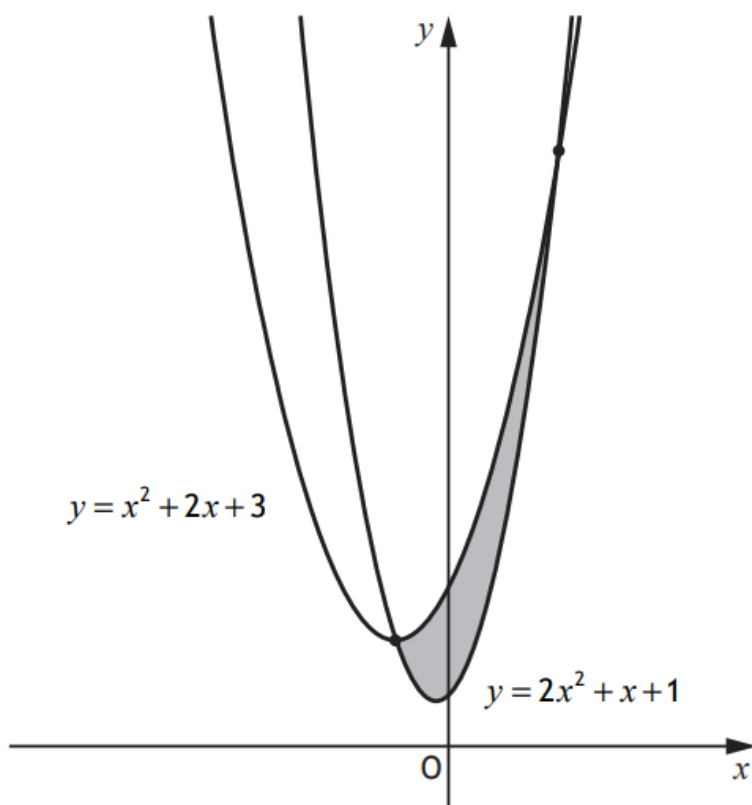




The graphs of $y = x^2 + 2x + 3$ and $y = 2x^2 + x + 1$ are shown below.



The graphs intersect at the points where $x = -1$ and $x = 2$.

- (a) Express the shaded area, enclosed between the curves, as an integral. 1
- (b) Evaluate the shaded area. 3

Answer:

(a)
$$\int_{-1}^2 (-x^2 + x + 2) dx$$

(b)
$$\frac{9}{2} \text{ units}^2$$