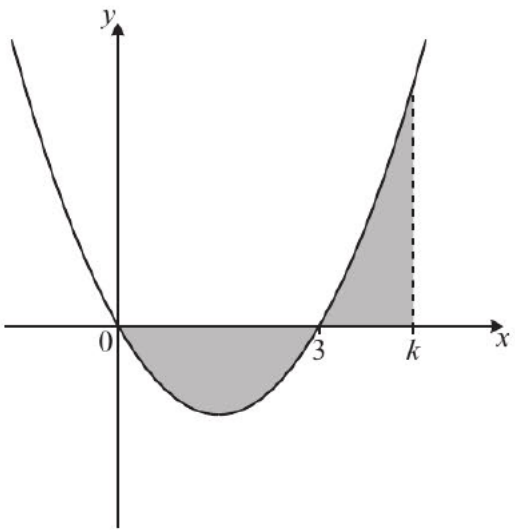
9 In this question you must show detailed reasoning.

The graph below shows the curve $y = x(x-3)$.

The region enclosed by the curve and the x-axis and the region between the curve, the x-axis and the line $x = k$ are shaded.



The areas of the two regions are equal.

Find the value of k. **[6]**