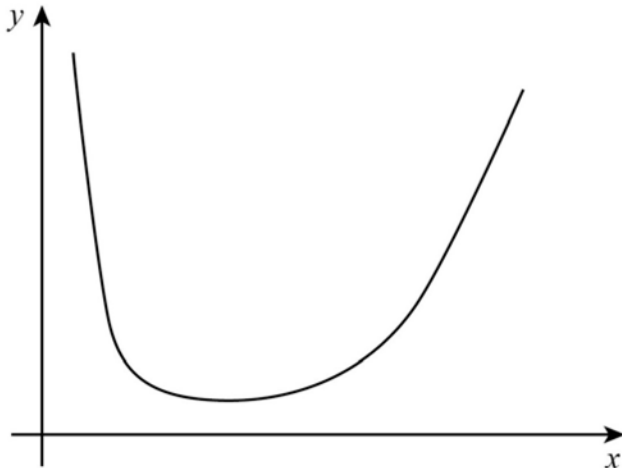


6

A curve has equation $y = 6x^2 + \frac{8}{x^2}$ and is sketched below for $x > 0$



Find the area of the region bounded by the curve, the x -axis and the lines $x = a$ and $x = 2a$, where $a > 0$, giving your answer in terms of a

[4 marks]