

Question 5**(8 marks)**

- (a) Determine the area bound by the graph of $f(x) = e^x$ and the x -axis between $x = 0$ and $x = \ln 2$. (3 marks)
- (b) Hence, determine the area bound by the graph of $f(x) = e^x$, the line $y = 2$ and the y -axis. (2 marks)
- (c) Determine the area bound by the graph of $f(x) = e^x$, the line $y = a$ and the y -axis, where a is a positive constant. (3 marks)