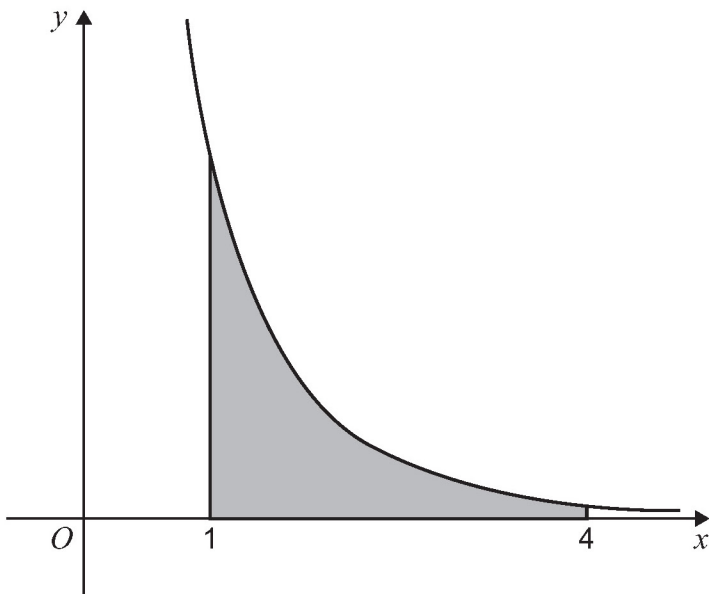


5

The graph of $y = \frac{5}{e^x - 1}$ is shown in the diagram below.



The trapezium rule with 6 ordinates (5 strips) is to be used to find an approximation for the shaded area.

The values required to obtain this approximation are shown in the table below.

x	1	1.6	2.2	2.8	3.4	4
y	2.90988	1.26485	0.62305	0.32374	0.17263	0.09329

5 (a) Use the trapezium rule with 6 ordinates (5 strips) to find an approximate value for the shaded area.

Give your answer to four decimal places.

[3 marks]

5 (b) Using your answer to part (a) deduce an estimate for $\int_1^4 \frac{20}{e^x - 1} dx$

[1 mark]