

11L Integration as the Limit of a Sum

1. The diagram shows a sketch of the curve with equation $y = \sin x$. The area under the curve between $x = 1$ and $x = 2$ can be thought of as a thin series of strips of height y and width δx . Calculate $\lim_{\delta x \rightarrow 0} \sum_{x=1}^2 \sin x \delta x$, giving your answer correct to 4 significant figures.

