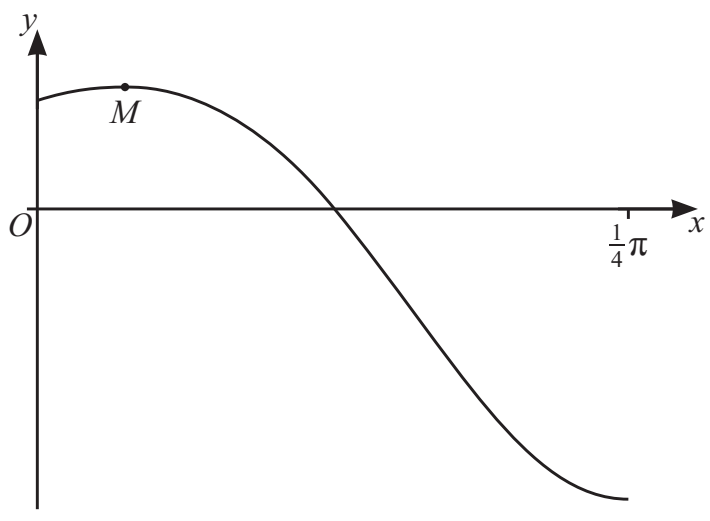
4



The diagram shows the graph of $y = e^{\sin 2x} \cos 4x$ for $0 \leqslant x \leqslant \frac{1}{4}\pi$, and its maximum point M.

Find the x-coordinate of M. [5]