8.1 Arc Length

單選題

1. Find the **length** of the curve $y=\int_1^x \sqrt{t^3-1}\,dt,\ 1\le x\le 4$.

(A) $\frac{62}{5}$, (B) $\frac{64}{5}$, (C) $\frac{66}{5}$, (D) $\frac{68}{5}$.

Ans: A [100 學年度]

填充題

1. Find the length of the curve $y=\int_e^x \sqrt{(\ln t)^2-1}\,dt$ from $x=e$ to $x=e^2$.

Ans: e^2 [99 學年度]

2. The **arc length** of the curve $y=\frac{1}{3}(\sqrt{x})^3-\sqrt{x}$ with $x\in[0,1]$ is _____.

Ans: $\frac{4}{3}$ [103 學年度]