



Q3) Evaluate the following limit.

$$\lim_{n \rightarrow \infty} \frac{2}{n} \left( \frac{1^9}{n^9} + \frac{2^9}{n^9} + \frac{3^9}{n^9} + \cdots + \frac{n^9}{n^9} \right)$$

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Q4) Evaluate the following integral.

$$\int (x^e + e^x + e^e) dx$$