TOPIC
Mathematics

QUESTION

Polynomials are most commonly used functions for interpolation because they are easy to

(A) Evaluate
(B) Differentiate
(C) Integrate
(D) Evaluate, differentiate and integrate

HINT
Polynomials are simple functions.

For evaluation, you need to evaluate expressions such as x^n, which simply means multiplying x to itself n-1 times.

For differentiation, the formula is simple

$$\frac{d}{dx}(x^n) = nx^{n-1}, n \neq 1$$ and again is easy to evaluate.

For integration, the formula is also simple

$$\int x^n dx = \frac{x^{n+1}}{n+1} + C$$ and again is easy to evaluate.

So what do you think is the answer? It is (D).

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