Horner scheme P50036_en

Let $p[0 \ldots n]$ be a vector of integer numbers that contains the coefficients of a polynomial of degree $n \geq 0$. For instance, the vector $p = \langle 3, 2, 5, -1 \rangle$ represents $p(x) = 3 + 2x + 5x^2 - x^3$, a polynomial of degree $n = 3$.

Write a function

int *evaluate* (**const** *vector*<**int**>& p, **int** x);

that evaluates the polynomial at the point x, that is, that returns $\sum_{i=0}^{n} p[i]x^i$.

Use the Horner scheme:

$$p_n x^n + p_{n-1} x^{n-1} + \cdots + p_0 = ((p_n x + p_{n-1})x + \ldots)x + p_0.$$

Observation

You only need to submit the required procedure; your main program will be ignored.

Problem information

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