Math 1190 Homework #10

We will talk about this problem on Monday, November 9th.

Problem: Let $p(x) = 2 + 4x + 3x^2 + 5x^3 + 3x^4 + 4x^5 + 2x^6$. For k with $0 < k < 5$, define

$$I_k = \int_0^\infty \frac{x^k}{p(x)}\, dx.$$

For which k is I_k smallest?