



The Integral Test

Question

The figure shows the graphs of two functions f and g along with the terms of $\sum_{k=1}^{\infty} a_k$ represented as boxes. Rank these four quantities:

$$\text{Int}_f = \int_2^{\infty} f(x) dx$$

$$\text{Int}_g = \int_3^{\infty} g(x) dx$$

$$\text{Sum}_2 = \sum_{k=2}^{\infty} a_k$$

$$\text{Sum}_3 = \sum_{k=3}^{\infty} a_k$$

- A. $\text{Int}_g \leq \text{Sum}_3 \leq \text{Sum}_2 \leq \text{Int}_f$.
- B. $\text{Int}_g \leq \text{Sum}_2 \leq \text{Sum}_3 \leq \text{Int}_f$.
- C. $\text{Sum}_3 \leq \text{Int}_g \leq \text{Sum}_2 \leq \text{Int}_f$.
- D. $\text{Int}_f \leq \text{Sum}_3 \leq \text{Sum}_2 \leq \text{Int}_g$.

