

Comparison Test



Question

By the p -test, $\sum_{n=1}^{\infty} \frac{1}{2\sqrt{n}}$ diverges. Which of the following statements is justified by the Comparison Test?

A. $\frac{1}{2\sqrt{n+7}} \geq \frac{1}{2\sqrt{n}}$ and therefore $\sum_{n=1}^{\infty} \frac{1}{2\sqrt{n+7}}$ diverges.

B. $\frac{1}{2\sqrt{n+7}} \leq \frac{1}{2\sqrt{n}}$ and therefore $\sum_{n=1}^{\infty} \frac{1}{2\sqrt{n+7}}$ diverges.

C. $\frac{1}{2\sqrt{n}-1} \leq \frac{1}{2\sqrt{n}}$ and therefore $\sum_{n=1}^{\infty} \frac{1}{2\sqrt{n}-1}$ diverges.

D. $\frac{1}{2\sqrt{n}-1} \geq \frac{1}{2\sqrt{n}}$ and therefore $\sum_{n=1}^{\infty} \frac{1}{2\sqrt{n}-1}$ diverges.