

SUGGESTED WORDINGS OF THE REQUIRED JUSTIFICATION

for Concluding C or D for a p-SERIES

For a **Convergent** p-Series $\sum_{n=1}^{\infty} \left(\frac{1}{n^k} \right)$ with $p = k$,

you must write a justification as clear and complete as the following:

"The SERIES $\sum_{n=1}^{\infty} \left(\frac{1}{n^k} \right)$ is CONVERGENT
because it is a p-SERIES with $p = k$ and $k > 1$.

SUGGESTED
WORDING

For a **Divergent** p-Series $\sum_{n=1}^{\infty} \left(\frac{1}{n^k} \right)$ with $p = k$,

you must write a justification as clear and complete as the following:

"The SERIES $\sum_{n=1}^{\infty} \left(\frac{1}{n^k} \right)$ is DIVERGENT
because it is a p-SERIES with $p = k$ and $k \leq 1$.

SUGGESTED
WORDING

For example: The series $\sum_{n=1}^{\infty} \left(\frac{1}{n\sqrt{n}} \right)$ is a p-Series because $\sum_{n=1}^{\infty} \left(\frac{1}{n\sqrt{n}} \right) = \sum_{n=1}^{\infty} \left(\frac{1}{n^{3/2}} \right)$.

You would write:

" The series $\sum_{n=1}^{\infty} \left(\frac{1}{n\sqrt{n}} \right) = \sum_{n=1}^{\infty} \left(\frac{1}{n^{3/2}} \right)$ is CONVERGENT

because it is a p-Series with $p = \frac{3}{2}$ and $\frac{3}{2} > 1$."