SUGGESTED WORDINGS OF THE REQUIRED JUSTIFICATIONS

for the RATIO TEST and for the ROOT TEST

SUGGESTED WORDINGS OF THE REQUIRED JUSTIFICATION

for Concluding Absolute Convergence by the RATIO TEST

Whenever you apply the RATIO TEST to conclude that the series $\sum_{n=1}^{\infty} a_n$ is **Absolutely Convergent,** you must write a justification as clear and complete as the following:

"Since $\lim_{n \to \infty} \left| \frac{a_{n+1}}{a_n} \right| = L$ *and* $L < 1$,

the series $\sum_{n=1}^{\infty} a_n$ is ABSOLUTELY CONVERGENT by the RATIO TEST ."

SUGGESTED WORDING

SUGGESTED WORDINGS OF THE REQUIRED JUSTIFICATION

for Concluding Divergence by the RATIO TEST

Whenever you apply the RATIO TEST to conclude that the series $\sum_{n=1}^{\infty} a_n$ is **Divergent,** you must write a justification as clear and complete as the following:

"Since $\lim_{n \to \infty} \left| \frac{a_{n+1}}{a_n} \right| = L$ *and* $L > 1$ (or $L = \infty$) ,

the series $\sum_{n=1}^{\infty} a_n$ is DIVERGENT by the RATIO TEST ."

SUGGESTED WORDING

SUGGESTED WORDINGS OF THE REQUIRED JUSTIFICATION

for Concluding Absolute Convergence by the ROOT TEST

Whenever you apply the ROOT TEST to conclude that the series $\sum_{n=1}^{\infty} a_n$ is **Absolutely Convergent,** you must write a justification as clear and complete as the following:

"Since $\lim_{n \to \infty} \sqrt[n]{|a_n|} = L$ *and* $L < 1$,

the series $\sum_{n=1}^{\infty} a_n$ is ABSOLUTELY CONVERGENT by the ROOT TEST ."

SUGGESTED WORDING

SUGGESTED WORDINGS OF THE REQUIRED JUSTIFICATION

for Concluding Divergence by the ROOT TEST

Whenever you apply the ROOT TEST to conclude that the series $\sum_{n=1}^{\infty} a_n$ is **Divergent,** you must write a justification as clear and complete as the following:

"Since $\lim_{n \to \infty} \sqrt[n]{|a_n|} = L$ *and* $L > 1$ (or $L = \infty$) ,

the series $\sum_{n=1}^{\infty} a_n$ is DIVERGENT by the ROOT TEST ."

SUGGESTED WORDING