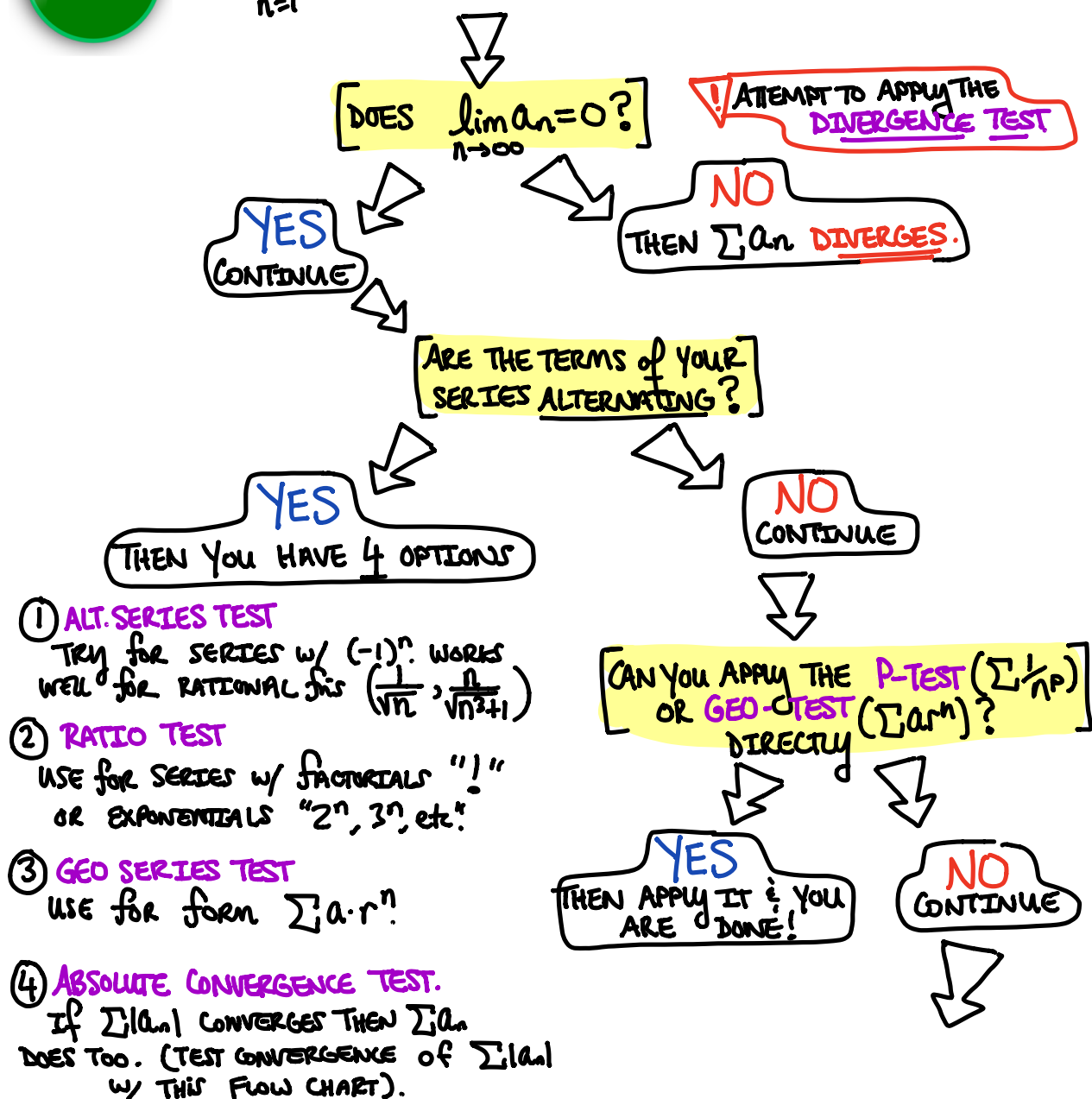


How To CHOOSE A TEST for CONVERGENCE.

! THE FOLLOWING IS MEANT AS A GUIDE TO HELP YOU CHOOSE THE CORRECT TEST. SOME TRIAL + ERROR MAY STILL BE NEEDED.

Start DOES $\sum_{n=1}^{\infty} a_n$ CONVERGE or DIVERGE.?



$$\sum \frac{1}{\sqrt{n^3+4}}$$

$$\sum \frac{2^n}{4^n+7}$$

DOES THE SERIES "LOOK" LIKE
A P-SERIES OR A GEO-SERIES?

YES

THEN TRY A COMPARISON TEST

NO
CONTINUE

① LIMIT COMPARISON TEST
Try 1st Always.

② THE COMPARISON TEST.

DOES THE SERIES HAVE FACTORIALS
"!" OR OTHER EXPONENTIAL TERMS
($2^n, 3^n$, etc...)?

YES

THEN APPLY THE
RATIO TEST AND YOU
ARE DONE!

NO
CONTINUE

$$\sum \frac{\ln(n)}{n}$$

LET $a_n = f(n)$. IS $\int_1^{\infty} f(x) dx$
EASILY EVALUATED?

YES

TRY THE
INTEGRAL
TEST

NO

WHELP... IT'S A
TRICKY ONE. EMAIL
INSTRUCTOR FOR A HINT!