

Series: Sections 9.2-9.4

Test the series for convergence or divergence. Name the test utilized.

Support your conclusion. If convergent, find the sum whenever possible

$a. \sum_{n=0}^{\infty} \frac{2^{n-1}}{3^n}$	$b. \sum_{n=1}^{\infty} \frac{2^n}{2^{n+1} + 1}$
$c. \sum_{n=1}^{\infty} \frac{n}{n^2 + 1}$	$d. \sum_{n=0}^{\infty} \frac{1}{n^2 + 3n + 2}$  <i>Telescopic: try partial fractions</i>
$e. \sum_{n=1}^{\infty} \frac{1}{n \sqrt[3]{n}}$	$f. \sum_{n=0}^{\infty} \left(\frac{\pi}{2}\right)^n$
$g. \sum_{n=1}^{\infty} \frac{n^2}{n^4 + 1}$	$h. \frac{1}{2} + \frac{2}{3} + \frac{3}{4} + \frac{4}{5} + \frac{5}{6} + \dots$
$i. \sum_{n=1}^{\infty} \frac{2^n}{n^2 + 1}$	$j. \sum_{n=0}^{\infty} (-1)^n \frac{5}{2^n}$

