11.4 OS TESTES DE COMPARAÇÃO

1-18 Determine se a série converge ou diverge.

1. $\displaystyle\sum_{n=1}^{\infty} \frac{1}{n^3 + n^2}$

2. $\displaystyle\sum_{n=1}^{\infty} \frac{3}{4^n + 5}$

3. $\displaystyle\sum_{n=1}^{\infty} \frac{3}{n2^n}$

4. $\displaystyle\sum_{n=2}^{\infty} \frac{1}{\sqrt{n} - 1}$

5. $\displaystyle\sum_{n=0}^{\infty} \frac{1 + 5^n}{4^n}$

6. $\displaystyle\sum_{n=1}^{\infty} \frac{\operatorname{sen}^2 n}{n\sqrt{n}}$

7. $\displaystyle\sum_{n=1}^{\infty} \frac{3}{n(n+3)}$

8. $\displaystyle\sum_{n=1}^{\infty} \frac{1}{\sqrt{n(n+1)(n+2)}}$

9. $\displaystyle\sum_{n=1}^{\infty} \frac{1}{\sqrt[3]{n(n+1)(n+2)}}$

10. $\displaystyle\sum_{n=1}^{\infty} \frac{n}{(n+1)2^n}$

11. $\displaystyle\sum_{n=1}^{\infty} \frac{3 + \cos n}{3^n}$

12. $\displaystyle\sum_{n=1}^{\infty} \frac{5n}{2n^2 - 5}$

13. $\displaystyle\sum_{n=1}^{\infty} \frac{n}{\sqrt{n^5 + 4}}$

14. $\displaystyle\sum_{n=1}^{\infty} \frac{\operatorname{arctg} n}{n^4}$

15. $\displaystyle\sum_{n=3}^{\infty} \frac{1}{n^2 - 4}$

16. $\displaystyle\sum_{n=1}^{\infty} \frac{n^2 + 1}{n^4 + 1}$

17. $\displaystyle\sum_{n=1}^{\infty} \frac{n + 1}{n2^n}$

18. $\displaystyle\sum_{n=1}^{\infty} \frac{n^2 - 3n}{\sqrt[3]{n^{10} - 4n^2}}$