Determine whether the series is absolutely convergent, conditionally convergent, or divergent. Calculus: Early Transcendentals 5e by James Stewart

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

2. $\displaystyle\sum_{n=0}^{\infty}\frac{(-10)^n}{n!}$

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

4. $\displaystyle\sum_{n=1}^{\infty}\frac{(-1)^{n-1}}{\sqrt[4]{n}}$

5. $\displaystyle\sum_{n=1}^{\infty}\frac{(-1)^n}{n^4}$

6. $\displaystyle\sum_{n=1}^{\infty}\frac{(-1)^n}{(\arctan n)^n}$

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

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

9. $\displaystyle\sum_{n=1}^{\infty}e^{-n}n!$

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

11. $\displaystyle\sum_{n=1}^{\infty}\frac{\sin 4n}{4^n}$

12. $\displaystyle\sum_{n=1}^{\infty}\frac{n(-3)^n}{4^{n-1}}$

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

14. $\displaystyle\sum_{n=1}^{\infty}\frac{10^n}{(n+1)4^{2n+1}}$

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

16. $\displaystyle\sum_{n=1}^{\infty}\frac{(-1)^n e^{1/n}}{n^3}$

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

18. $\displaystyle\sum_{n=1}^{\infty}(-1)^n\frac{n}{5+n}$