

AUC apCalculus BC

Assignment 9

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

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

$$7. \sum_{n=0}^{\infty} \frac{1}{4^n + 1}$$

$$9. \sum_{n=2}^{\infty} \frac{\ln n}{n + 1}$$

$$11. \sum_{n=0}^{\infty} \frac{1}{n!}$$

$$13. \sum_{n=0}^{\infty} e^{-n^2}$$

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

$$6. \sum_{n=2}^{\infty} \frac{1}{\sqrt{n} - 1}$$

$$8. \sum_{n=0}^{\infty} \frac{4^n}{5^n + 3}$$

$$10. \sum_{n=1}^{\infty} \frac{1}{\sqrt{n^3 + 1}}$$

$$12. \sum_{n=1}^{\infty} \frac{1}{4\sqrt[3]{n} - 1}$$

$$14. \sum_{n=1}^{\infty} \frac{3^n}{2^n - 1}$$

$$15. \sum_{n=1}^{\infty} \frac{n}{n^2 + 1}$$

$$17. \sum_{n=0}^{\infty} \frac{1}{\sqrt{n^2 + 1}}$$

$$19. \sum_{n=1}^{\infty} \frac{2n^2 - 1}{3n^5 + 2n + 1}$$

$$21. \sum_{n=1}^{\infty} \frac{n + 3}{n(n^2 + 4)}$$

$$23. \sum_{n=1}^{\infty} \frac{1}{n\sqrt{n^2 + 1}}$$

$$25. \sum_{n=1}^{\infty} \frac{n^{k-1}}{n^k + 1}, \quad k > 2$$

$$27. \sum_{n=1}^{\infty} \sin \frac{1}{n}$$

$$16. \sum_{n=1}^{\infty} \frac{5}{4^n + 1}$$

$$18. \sum_{n=1}^{\infty} \frac{2^n + 1}{5^n + 1}$$

$$20. \sum_{n=1}^{\infty} \frac{n + 5}{n^3 - 2n + 3}$$

$$22. \sum_{n=1}^{\infty} \frac{1}{n^2(n + 3)}$$

$$24. \sum_{n=1}^{\infty} \frac{n}{(n + 1)2^{n-1}}$$

$$26. \sum_{n=1}^{\infty} \frac{5}{n + \sqrt{n^2 + 4}}$$

$$28. \sum_{n=1}^{\infty} \tan \frac{1}{n}$$

$$29. \sum_{n=1}^{\infty} \frac{\sqrt[3]{n}}{n}$$

$$31. \sum_{n=1}^{\infty} \frac{1}{5^n + 1}$$

$$33. \sum_{n=1}^{\infty} \frac{2n}{3n - 2}$$

$$35. \sum_{n=1}^{\infty} \frac{n}{(n^2 + 1)^2}$$

$$30. \sum_{n=0}^{\infty} 7\left(-\frac{1}{7}\right)^n$$

$$32. \sum_{n=2}^{\infty} \frac{1}{n^3 - 8}$$

$$34. \sum_{n=1}^{\infty} \left(\frac{1}{n + 1} - \frac{1}{n + 2} \right)$$

$$36. \sum_{n=1}^{\infty} \frac{3}{n(n + 3)}$$