TaylorSeriesQuestions

May 26, 2020

Question Set

Q1.The approximate value of $(27.27)^{1/3}$
a)$3 + 0.01 - \frac{0.0001}{3} + ..$
b)$3 + \frac{0.01}{3} - \frac{0.0001}{3^2} + ..$
c)$3 + 0.01 - 0.0001 + ..$
d)$3 - 0.01 + \frac{0.0001}{3} + ..$

Q2. $\int_{-1}^{1} e^{-x^2} dx$ is
a)$\sum_{n=0}^{\infty} \frac{(-1)^n}{2n+1}$
b)$2\sum_{n=0}^{\infty} \frac{(-1)^n}{2n+1}$
c)$2\sum_{n=0}^{\infty} \frac{(-1)^n}{2n-1}$
d)$\sum_{n=0}^{\infty} \frac{(-1)^n}{2n-1}$

Q3.The approximate value of $e * cos(1)$ is
a)$1 + 1 + \frac{1}{2} - \frac{1}{6} + \frac{1}{4} - \frac{1}{12}$
b)$1 + 1 - \frac{1}{3} + \frac{1}{6} - \frac{1}{4} + \frac{1}{8}$
c)$1 + 1 + \frac{1}{3} - \frac{1}{6} + \frac{1}{4} - \frac{1}{8}$
d)$1 + 1 - \frac{1}{2} + \frac{1}{6} - \frac{1}{4} + \frac{1}{12}$

Q4.Approximate value of Π is
a)3.1415926
b)$4 - \frac{4}{3} + \frac{4}{5} - \frac{4}{7} + ..$
c)$\frac{3}{2}(1 + \frac{1}{2} + \frac{1}{4} + \frac{1}{8} + ..)$
d)$3(1 - \frac{1}{2} + \frac{1}{4} - \frac{1}{8} + ..)$

Q5.Find $\int_0^x \frac{sin(t)}{t} dt$
a)$\sum_{n=0}^{\infty} (-1)^n \frac{x^{2n-1}}{(2n+1)(2n+1)!}$
b)$\sum_{n=0}^{\infty} \frac{x^{2n+1}}{(2n+1)(2n+1)!}$
c)$\sum_{n=0}^{\infty} (-1)^n \frac{x^{2n+1}}{(2n+1)(2n+1)!}$
d)$\sum_{n=0}^{\infty} (-1)^n \frac{x^{2n-1}}{(2n-1)(2n+1)!}$

key : a,a,d,(a,b),c