Q1. The interval of convergence of the power series $\sum_{n=1}^{\infty} \frac{(2x-1)^n}{n^3}$ is

Q2. If the first three nonzero terms of the Maclaurin series for $tan^{-1}x$ are used, then the approximation of $tan^{-1}1$ is

Q3. The Maclaurin series for the function $f(x) = \dfrac{1-\cos x}{x^2}$, $x \neq 0$ is

Q4. The radius and interval of convergence of the series $\displaystyle\sum_{n=0}^{\infty} \dfrac{2^n (x-3)^n}{\sqrt{n+3}}$ are respectively